



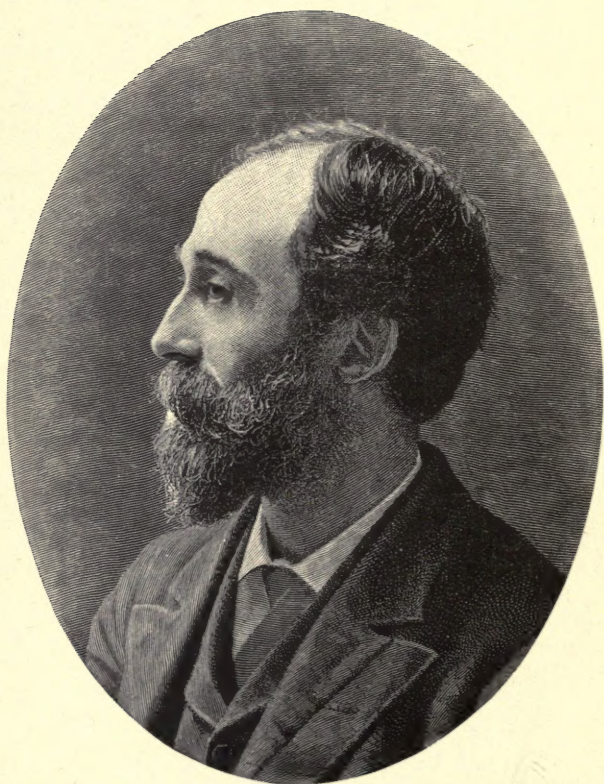




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THE LIFE-ROMANCE OF AN ALGEBRAIST



THE LIFE-ROMANCE OF AN ALGEBRAIST

BY

George Winslow Pierce

BOSTON

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Dedication.



To the untold gold of Harvard University,
Summa Laudatrix,
and the memory of my loving instructor,
Benjamin Peirce,

I

add

REMEMBRANCE.

Preface.



And what is new, of these simple discoveries,
to Algebra.

Q · HORATI FLACCI CARMEN SAECULARE, 9, 10, 11, 12.

Alme Sol, curru nitido diem qui
Promis et celas, aliusque et idem
Nasceris, possis nihil urbe Roma
Visere majus.

Thou generous god, with glittering car,
That hold'st the day and hold'st afar,
Forever other and the same,
Canst ne'er unread the Roman name.

And mayst irradiate a *pupil's* verse,
And read a single permutation, P(ie)ree.

DIXI . SVFFIX I . SVFFIXA . COLENDOQVE . VIXI

George W. Perce,
Esq. respectable Black
Bastard.

I TOOK a room, where rooms were cheap, and out of the current, in the Old Brattle House, in '60, 1, a second-hand, four-dollar black-walnut table (it was solid), two cane-seat arm-chairs (I am writing now in one of them), and an air-tight wood stove. I had two motives: one was Ambition; and the other, to Win the Woman I had loved from childhood who would not recognize my devotion. I can see her now, nine years old, turning on her doorstep to look back, but not at me. A Dream! and I eleven! [Our mothers were friendly neighbors, when we were in arms.] "She is looking right over your head!" my sister said to me; and I made no answer, except in silence, "She shall have to look *very high*!" About the middle of my Senior year I was approached by Benjamin Peirce's daughter-in-law with the offer of a pupil, her nephew, a millionaire's son and millionheiress' — "and, Mr. Pierce, *money's no object*!" Foolish boy! (myself, I mean) I took him! I was finishing a Forensic, for Professor Bowen (English composition, on a metaphysical subject, — I forget what, this moment). A forensic was marked 96, if perfect, a serious matter; twelve recitations, once a fortnight. At the last moment I discovered that I was *wrong* (!) With half-an-hour to correct it, I bent myself against the argument. My pupil was snapping a big knife in the window again and again, which took off my attention every time; for I was paid to cure him of Idleness — a good fellow — six hundred dollars for the broken year. He never took more than twenty minutes' actual time; couldn't carry more than I could give him in twenty, any one day. If I could go back and pay him five thousand dollars to keep away, and he were willing, how gladly would I reverse the stream of Time!

Full of power, and suspecting no weakness, I bent myself, after every snap, without a word, to the task before me; but the last snap snapped something in my head, behind, and a trembling thrill spread slowly over the cerebellum and settled in a pressure in my *ears*! I had to shirk my lessons—it was May, and a week's vacation helped me—the remaining few weeks of the College Course; but a glib tongue and my reputation carried me through! Dear Doctor Charles E. Brown-Séguard gave me ELLIXIRS (of Death, Arsenic, Strychnine), and for external application, Croton Oil, and *ice*. Don't smile! *Ice* is most *painful*! Arsenic is bad enough! if you take one dose too many, as I did. Any one who had stood under my chamber window the night I took it would have thought there was a prayer-meeting overhead. I didn't call any human being to my assistance, knowing I should live through it; a little herpes, which had come out to warn me the day before, under my stomach; and now neuralgia *in* it, Arsenic! I went to Europe, then to the Forest, of which again I am a Graduate. Nothing in College compares with the training of Peter White Duck on the Coulouge, and Aleck (reprobate) and Joe Langevin, half-breed giants, on the Jacquot (Upper Ottawa Valley and water-sheds). No one of the three would point a rifle in my presence, at a moose gazing at us, a duck flying. Observation, Ah! and Self-Command! Unloaded rifles behind me in the bow. Crash! crash!! crash!!! the bank before me. Hurry up! hurry up!! hurry up!!! in a whisper from behind. To reach behind, pick up a rifle,—I could not turn without upsetting the canoe—making no sound, load it, and fire at the heart, holding my own from fluttering all the time, and not knowing what was coming—so close upon me!—was daily Training. "There's beaver road!" some bits of floating grass along the creek-side, "an old carry!" cut ten years before, the blackened stumps of bushes,

six or eight inches high, but visible, when you *see* them in the underwood, which I had to follow, when he outwalked me, or had left me picking blueberries,—daily Observation. Both eyes were poor; I could not aim a rifle with the right one; but I saw through them; and our Living, which was royal, *from hand to mouth*, depended on them. Ears, keen. “I don’t wonder,” said I to Joe, “the moose can smell us,” one night when we were watching in the canoe, “I smell a moose!” It was pitch dark.

HOW I GOT THE BIG BULL’S HEAD.

I have lost the account; and must rewrite it, if I can, from memory.

I had just missed a cow-moose, which went crashing off from a woody point through the water behind it, into the bushes,—the cows are timid—giving me just a glimpse of her hind-quarters, on the big lake to which we had paddled from our camp on the smaller, Upper Jacquot; and my top feather was drooping visibly, when Joe spied a bull, on the opposite shore, a mile away. “You must help me!” said he; and how I paddled in the bow! “It isn’t a moose at all,” he whispered, “it’s the devil!” as we drew near. I was praying hard. A little island coming between us, he got me behind it, telling me I need not paddle any more. Such a wrinkly old head as that bull had, looking straight at us, as we passed the island! We went fast upon a rock: but I never winked, nor my hand trembled, looking at him through the sights of my nine-pounder. If he had turned he would have

caught it, a *long shot*! But he lowered his head again under the water, feeding, and the canoe went gently backwards. When he looked up again we were upon him! within forty feet! How he looked at us, wicked old he! "Don't shoot till he turns!" came from behind me. He turned slowly. Peal! went the rifle. "Shoot again!" from Joe, in a frantic whisper, jumping up and catching the little rifle, sighted for pigeons, and letting him have it, over my head, never touching a hair of him. Again! pealed the big rifle, another ball close to his heart, or in it; and the beast went down with a tremendous triple fall, like the successive rolls of a clap of thunder, while I swung my hat and shouted. We towed him ashore, touched a dry birch still standing, with a match,—What an illumination! —to keep wild beasts off, went back for help (it was sundown), and returned next morning with Gabrielle (the way they pronounced it), a man camp cook. The bull was measured, five feet three inches round the collar, and nine feet in girth, having bloated somewhat in the water. We could not get the tump line under him, but took from the middle crease of his belly to his backbone, and doubled. The skin has shrunk, so that he wouldn't know his own neck, in drying; but we had no engine to keep it stretched, and could not have carried if we had had.

ORDER OF PERFORMANCES

FOR

COMMEMENT,

WEDNESDAY, XX. JULY, MDCCCLXIV.

MUSIC.

26. An Oration, *summa cum laude*, "The Opportunities
of the Present Time."

GEORGE WINSLOW PIERCE, *Boston.*

HARVARD COLLEGE,

CAMBRIDGE, MASS.,

28th Sept., 1870.

*To the Sub-Committee on the Boston
Latin School.*

I certify with pleasure that Mr. George W. Pierce was the first scholar in the class which graduated here in 1864. He was preeminent in mathematics.

CHARLES W. ELIOT

President.

Cambridge September 28 1870

I have the greatest pleasure
in recommending my friend
Mr George W Pierce
for the position of instructor
in mathematics in the Latin
School. I have always regarded
Mr Pierce as possessing unsur-
passed mathematical ability,
and with his extraordinary
capacity as a scholar, I am

sure that he only needs
opportunity to acquire distinction
for himself, and throw lustre
upon the institution with which
he may be connected -

Very Respectfully

Benjamin Peirce

To the Honorable
The Latin School Committee
of Boston -

WALTHAM, Sept. 29, 1870

I take great pleasure in certifying to the excellent character and extraordinary ability in Mathematics of George Winslow Pierce, who graduated at Cambridge with the highest honors in the class of 1864.

THOMAS HILL

Late President of
Harvard College.

Mr. Pierce, I should add, showed marked ability as an instructor in mathematics after his graduation, taking charge of the class during Mr J M Peirces absence in Europe.

REPRINT FROM [HARVARD COLLEGE] SECRETARY'S REPORT.

CLASS OF 1864.

GEORGE WINSLOW PIERCE, son of John Winslow and Lydia Ann (Osborne) Pierce, was born in Boston, March 24, 1841. He fitted himself for college.

In the fall of 1864, he entered the Harvard Law School, where he remained a year; and July 19, 1865, he sailed for Europe, where he remained about six months, visiting the various points of interest,—the top of Mont Blanc, for instance. During the fall and winter of 1866-67, he acted as Tutor in Mathematics in Harvard College, supplying the place of J. M. Peirce, who was absent in Europe. In the fall of 1867, he began again the study of law; and January 1, 1868, he entered the office of Chandler, Shattuck & Thayer in Boston. He was admitted, June 3, 1868, a member of the Suffolk Bar.

He left Boston, June 29th of the same year, for Minnesota, with the intention of going on a farm to recruit his health. At Frontenac, he found friends, one of whom lent him a gun, and showed him how to use it. He returned in two months, and accepted a position as instructor in the English High School. In the autumn of 1870, he was appointed Instructor in Mathematics in the Boston Latin School, which position he resigned in June, 1873, and opened an office, in October of the same year, as a Counsellor at Law.

Being still compelled to go every year in search of health, he made five trips to the New York woods and ten more to the Ottawa Valley, had many encounters by day and night with men and beasts, and seldom slept in a bed in August. A moose head of his own shooting adorns the entrance to the Memorial Dining Hall (Frontispiece), with his inscription,—

AVRO · AGRISQVE · CARENS · VICTOR · DONAVIT · ALVMNVS

Introduction Conclusion.

Paradox.



I mean Immortality, and will win HER; have courted Death, who hath always turned *his back* to me. On my last Trip I said to myself, as I left Boston, I will not turn aside from any form of death. How I longed for it! Now *I* have turned, am seeking Life, and will force myself upon HER. No Introduction was intended, but IT. This was written last, after Discovery, simple first and always, had begun to unfold itself and open, into SOMETHING, like a flower, under my hand.

Inscription.



AVRO · AGRISQVE · CARENS · VICTOR · DIVISIT · ALVMNVS

SOLUTIONS OF THE GENERAL ALGEBRAIC EQUATION.

IT may be written

$$x^n = x^{n-1} \sum x (=0) - x^{n-2} \sum x x_2 + x^{n-3} \sum x x_2 x_3 - x^{n-4} \sum x x_2 x_3 x_4 + \&c. - (-1)^n x x_2 x_3 x_4 x_5 \&c.,$$

in which Σ (a *complete* function) is the sum of all values of the same form. $a^n = 1$ is a particular case. All $x\Sigma$'s whatever and complete continued products (embryo Σ 's) are constants (given or calculable), and have parts which are or go into *permanent* functions $((x-x_2)^2, x^2x_2 + x_2^2x_3 + x_3^2x, (x+x_2-x_3-x_4)^2, \text{ for instance, with } 1, 2, 3 \text{ values when } n \text{ equals successively } 2, 3, \text{ and } 4)$ which, containing all x 's, are interchanged but not broken up by x 's permutations, are the only steps from $x\Sigma$'s to x 's, and are Independent of the Form of the attempted solution. $a\Sigma$'s are zero except those of the $(1, 2, 3, m)$ n th degrees. The sum of the n powers of $a_2, a_3 \&c., a_n$ is also zero.

PROOF.

$$1 - a^n = 0 = (1-a)(1+a+a^2+a^3+a^4+\&c. + a^{n-1} (=0 \text{ when } a \text{ is anything but } 1)).$$

The n th root of both sides of IT is (dropping &c.)

$$x = a (= 0) + \Sigma b = a + b + c + d + (\text{with } n \text{ terms})$$

$$= \frac{1}{n} \left[(x + x_2 + x_3 + x_4 + (=0)) + a^{n-1} (x + a_2 x_2 + a_2^2 x_3 + a_2^3 x_4 +) + a^{n-2} (x + a_3 x_2 + a_3^2 x_3 + a_3^3 x_4 +) + a^{n-3} (x + a_4 x_2 + a_4^2 x_3 + a_4^3 x_4 +) + \right. \\ \left. (=x + a_2^2 x_2 + a_2^4 x_3 + a_2^6 x_4 +) \quad (=x + a_2^3 x_2 + a_2^5 x_3 + a_2^7 x_4 +) \right]$$

($n()$'s in which exponents may have n 's subtracted from them, and a_2 is an ultimate a).

PROOFS.

I.

$$\text{When } a = 1, \quad x = \frac{1}{n} [nx] = x;$$

$$\text{When } a = a_2, \quad x = \frac{1}{n} [nx_2] = x_2;$$

$$\text{When } a = a_3, \quad x = \frac{1}{n} [nx_3] = x_3; \quad (\text{the coefficient of } x_2, \text{ for instance, being } \frac{1}{n} [1 + (a_2)^{n-1} a_2 (= a_2^{n-1}) + a_2^{n-2} + a_2^{n-3} +] = 0).$$

&c., &c.,
as in IT.

II.

Raising both sides to the n th power reproduces IT.

When $n = 0$, no equation, only 1, IT's second member being in posse.

When $n = 1$, one equation, $x = x$, IT.

When $n = 2$, $x^2 = (\frac{1}{2}[(x + x_2)(= 0)] \pm (x - x_2))^2 = \frac{1}{4}[-4xx_2] = -xx_2$, IT.

When $n = 3$, $x^3 = (\frac{1}{3}[x^2(x + \beta x_2 + \beta^2 x_3) + a(x + \beta^2 x_2 + \beta x_3)])^3$ (β , to save Greek type, is a_2),

$$3b = a^2(x + \beta x_2 + \beta^2 x_3)$$

$$3c = a(x + \beta^2 x_2 + \beta x_3)$$

$$9bc = \Sigma x^2 - \Sigma ax_2 = -3 \Sigma ax_2$$

$$27 \Sigma b^3 = 2 \Sigma x^3 - 3 \Sigma x^2 x_2 + 12 xx_2 x_3$$

$$\Sigma x^3 = (\Sigma x(= 0))^3 - 3 \Sigma x^2 x_2 - 6 xx_2 x_3$$

$$3 = 27 - 3 \times 6 - 6$$

$$\Sigma x^2 x_2 = \Sigma x \Sigma ax_2 - 3 xx_2 x_3$$

$$6 = 3 \times 3 - 3$$

$$27 \Sigma b^3 = -9 \Sigma x^2 x_2 = 27 xx_2 x_3$$

$$x^3 = (\Sigma b)^3 = (b + c)^3 = 3bcx + \Sigma b^3 = -x \Sigma ax_2 + xx_2 x_3, \text{ IT.}$$

in which the figures underneath are the corrective tests.

When $n = 4$, $x^4 = (\frac{1}{4}[\alpha^3(x + a_2x_2 + a_2^2x_3 + a_2^3x_4) + \alpha^2(x + a_3x_2 + a_3^2x_3 + a_3^3x_4) + \alpha(x + a_4x_2 + a_4^2x_3 + a_4^3x_4)])^4$

$$\begin{array}{rcl} 0 & = & x \quad + \quad x_2 + x_3 \quad + \quad x_4 \\ 4\alpha b & = & x + \sqrt{-1}x_2 - x_3 - \sqrt{-1}x_4 \\ 4\alpha^2c & = & x \quad - \quad x_2 + x_3 \quad - \quad x_4 \\ 4\alpha^3d & = & x - \sqrt{-1}x_2 - x_3 + \sqrt{-1}x_4 \end{array}$$

$$\begin{array}{rcl} \alpha b + \alpha^2c & + & \alpha^3d = x \\ -\sqrt{-1}\alpha b - \alpha^2c + \sqrt{-1}\alpha^3d & = & x_2 \\ -\alpha b + \alpha^2c & - & \alpha^3d = x_3 \\ \sqrt{-1}\alpha b - \alpha^2c - \sqrt{-1}\alpha^3d & = & x_4 \end{array}$$

$$\begin{array}{rcl} 0 & = & 0 \\ -4bd - 2c^2 & = & \Sigma xx_2 \\ 4(b^2c + cd^2) & = & \Sigma xx_2x_3 \\ -b^4 + c^4 - d^4 + 2b^2d^2 - 4bc^2d & = & xx_2x_3x_4 \\ x^2 & = & (\Sigma b)^2 = (b + c + d)^2 \end{array}$$

$$(x^2 - 2bd - c^2)^2 = (b^2 + d^2 + 2bc + 2cd)^2 = b^4 + d^4 + 2b^2d^2 + 8bc^2d + 4(b^2c + cd^2)x$$

$$\begin{array}{rcl} x^4 & = & 2(2bd + c^2)x^2 + 4(b^2c + cd^2)x + b^4 - c^4 + d^4 - 2b^2d^2 + 4bc^2d = -x^2\Sigma xx_2 + x\Sigma xx_2x_3 - xx_2x_3x_4, \quad \text{IT.} \\ (1+1+1)^4 & = & 2 \times 3 \times 9 \quad + \quad 4 \times 2 \times 3 \quad + \quad 3 \end{array}$$

The simplest solution (the common one) is

$$n=(n')^2, \quad n'=2, \quad \alpha^2=1, \quad x=\sqrt{c^2+\sqrt{c_2^2+\sqrt{c_3^2}}$$

$$\begin{array}{ccccccc} x_2 & = & + & - & - & - & \\ x_3 & = & - & + & - & - & \\ x_4 & = & - & - & - & + & \end{array}$$

0 = 0 , dividing the Fourth three ways into Seconds and solving it by the p(s) of the Seconds, (x - x2) + (x3 - x4), &c. A solution of the 2nd degree would be

$$x^2 = \frac{xx_2x_3}{x_2x_3}, \quad \&c., \quad p = xx_2 + x_3x_4,$$

$$\begin{array}{ccccccccccc} p^3 & = & p^2 \sum xx_2 & - & p \sum x^2 x_2 x_3 & + & \sum x^2 x_2^2 x_3^2 & + & xx_2 x_3 x_4 \sum x^2 & = & p^2 \sum xx_2 & + & 4 p xx_2 x_3 x_4 & + & 0 & + & (\sum xx_2 x_3)^2 & - & 4 xx_2 x_3 x_4 \sum xx_2, \\ 8 & = & 4 \times 6 & - & 2 \times 12 & + & 4 & + & 4 & = & 4 \times 6 & + & 4 \times 2 & - & 16 & + & 16 & - & 4 \times 6 \end{array}$$

$$xx_3 = \frac{1}{2}(p + \sqrt{(p^2 - 4xx_2x_3x_4)}), \quad \&c.$$

I shall not attempt, at present, to exhibit at once all the solutions from the General to the simplest when n has factors, and the General, when n is prime, IT being written, $x^{n^2'n_2'n_3'} \&c. = -x^{n^2'n_2'n_3'} \&c. - \sum xx_2 + \&c.$ When n = 5, the table shows the sextuple solutions.

$5b$	$5c$	$5d$	$5e$	$5b_2$	$5c_2$	$5d_2$	$5e_2$
$5x = 01234 + 02413 + 03142 + 04321$				01243 + 02431 + 03124 + 04312			
$5x_2 = 40123$	30241	20314	10432	40132	30214	20341	10423
$5x_3 = 34012$	13024	42031	21043	34021	13042	42013	21034
$5x_4 = 23401$	41302	14203	32104	12304	24103	31402	43201
$5x_5 = 12340$	24130	31420	43210	23410	41320	14230	32140
$5b_3$	$5c_3$	$5d_3$	$5e_3$	$5b_4$	$5c_4$	$5d_4$	$5e_4$
$5x = 01342$	02134	03421	04213	01324	02143	03412	04231
$5x_2 = 40231$	30412	20143	10324	40213	30421	20134	10342
$5x_3 = 23014$	41023	14032	32041	23041	41032	14023	32014
$5x_4 = 12403$	24301	31204	43102	34102	13204	42301	21403
$5x_5 = 34120$	13240	42310	21430	12430	24310	31240	43120
$5b_5$	$5c_5$	$5d_5$	$5e_5$	$5b_6$	$5c_6$	$5d_6$	$5e_6$
$5x = 01423$	02341	03214	04132	01432	02314	03241	04123
$5x_2 = 40312$	30124	20431	10243	40321	30142	20413	10234
$5x_3 = 12034$	24013	31042	43021	12043	24031	31024	43012
$5x_4 = 34201$	13402	42103	21304	23104	41203	14302	32401
$5x_5 = 23140$	41230	14320	32410	34210	13420	42130	21340

SIX blocks, obviously permanent, in which only exponents of β are written and the x 's understood.

$5b$	with 120	$=$, for instance, $x + \beta x_2 + \beta^2 x_3 + \beta^3 x_4 + \beta^4 x_5$ [multiply by β^4] $5\beta^4 b = \beta^4 x + x_2 + \beta x_3 + \beta^2 x_4 + \beta^3 x_5$
$5c$	values by x 's	$=$ $x + \beta^2 x_2 + \beta^4 x_3 + \beta x_4 + \beta^3 x_5$ [
$5d$	permutations	$=$ $x + \beta^3 x_2 + \beta x_3 + \beta^4 x_4 + \beta^2 x_5$ [
$5e$		$=$ $x + \beta^4 x_2 + \beta^3 x_3 + \beta^2 x_4 + \beta x_5$ [
0		$=$ $x + x_2 + x_3 + x_4 + x_5$
$5(b+c+d+e)$		$=$ $5x$
		$5(\beta^4 b + \beta^3 c + \beta^2 d + \beta e) = 5x_2$, &c.

b exponents not divisible by 5 have zeros for coefficients in $b^{120} =$. (25 terms.)

In the fifth powers the β coefficients of b 's become unity, and $(5b)^5$ has 24 values, the sum of which has six parts, permanent functions, $(01234)^5 + (02413)^5 + (03142)^5 + (04321)^5$, $(5b_2)^5 + (5c_2)^5 + (5d_2)^5 + (5e_2)^5$, and four others, the Σ of which and Σ 's of products, and continued product, are constant coefficients of an equation, which can be written, of the sixth degree.

$b^5 c^4 + b^4 d^5 + b^3 e^5 + c^5 d^5 + c^4 e^5 + d^5 e^5 + b^5 c^4 d^5 + b^4 c^5 d^5 + b^3 c^4 e^5 + c^5 d^4 e^5 + c^4 d^5 e^5 + b^5 c^4 d^5 e^5$, and $bode$, are also obviously roots of equations of the sixth degree and coefficients of six of the fourth.

$$(b^5)^4 = (b^5)^3(b^5 + c^5 + d^5 + e^5) - (b^5)^2(b^5 c^5 + b^5 d^5 + b^5 e^5 + c^5 d^5 + c^5 e^5 + d^5 e^5) + b^5(b^5 c^5 d^5 + b^5 c^4 d^5 + b^5 c^3 d^5 + b^5 c^2 d^5 + b^5 c^1 d^5) - b^5 c^4 d^5 e^5;$$

$$(b^5)^4 = (b^5)^3(b^5 + c^5 + d^5 + e^5) - \&c.; \text{ and four others, of which the 120 roots are } b = \sqrt[5]{b^5}, \sqrt[5]{c^5}, \sqrt[5]{d^5}, \sqrt[5]{e^5};$$

$$\sqrt[5]{b_2}, \sqrt[5]{c_2}, \sqrt[5]{d_2}, \sqrt[5]{e_2}; \sqrt[5]{b_3}, \&c.; \sqrt[5]{b_4}, \&c.; \sqrt[5]{b_5}, \&c. \text{ (25 terms.)}$$

$$\begin{aligned}
 x^5 &= (\Sigma b)^5 = (b + c + d + e)^5 = 5x^2 \Sigma b^2 c - 5x^2 \Sigma b^2 c d - 5x^2 \Sigma b^2 c d e - 5x^2 \Sigma b^2 c d e + 5 \Sigma b^5, \\
 1024 &= (4)^5 = (1 + 1 + 1 + 1)^5 = 5 \times 64 \times 6 - 5 \times 16 \times 4 - 5 \times 4 [36 - 1] + 5 \times 6 \times 4 + 4
 \end{aligned}$$

which, obtained by the old, by the use of Σ 's

$$\begin{aligned}
 (\Sigma b^4 c &= \Sigma b^3 \Sigma b^2 c - \Sigma b^3 c d, \quad \Sigma b^3 = x^3 - 3 \Sigma b^2 c - 6 \Sigma b^2 c d, \quad \Sigma b^2 c = x \Sigma b^2 c - 3 \Sigma b^2 c d \text{ (for instance), when } n=5), \\
 12 \quad 4 \times 6 - 12 \quad 4 \quad 64 - 36 - 24 \quad 12 \quad 24 \quad -12
 \end{aligned}$$

is itself a new form of the Polynomial Theorem and the General Equation at the same time, and is satisfied by making corresponding coefficients equal, going up to the 20th (the $n(n-1)$ th), by substitution of

$$b^4 = b^3 x - b^2 \Sigma b^2 c + b \Sigma b^2 c d - b c d e, \quad x = b + \frac{\Sigma b^2 c}{b} - \frac{\Sigma b^2 c d}{b^2} + \frac{b c d e}{b^3} \text{ (for instance),}$$

in the General fifth, a stumbling-block then, removable thus.

$b \Sigma$'s being variable (30ple permanents) in the table, cannot be equal, each to each, to x invariables. Their constant parts *are*. The rest runs down to lower x exponents, the = 's becoming

$$\begin{aligned}
 x^5 &= 5(b e + c d) x^3 + 5(b^2 d + b c^2 + c e^2 + d^2 e) x^2 + 5(b^3 c + b d^3 + c^2 e + d e^3 - b^2 e^2 - c^2 d^2 + b c d e) x \\
 1024 \quad 5 \times 2 \times 64 \quad 5 \times 4 \times 16 \quad 5 \times 3 \times 4 \\
 &+ 5(-b^3 d e - b c^3 d - b c e^3 - c d^3 e + b^2 c d^2 + b^2 c^2 e + b d^2 e^2 + c^2 d e^2) + \Sigma b^5, \\
 &5(0) \quad 4
 \end{aligned}$$

β coefficients of b 's within ()'s, as appears by the table, becoming 1 in every possible way, the corrective test of every Form Constant.

Of 30 take each $be + cd$, the first, for instance, and let

$$A = x_2x_2 + x_2x_3 + x_3x_4 + x_4x_5 + x_5x_6, \quad B = xx_3 + x_2x_4 + x_3x_5 + x_4x_6 + x_5x_2,$$

$$5b = 01234,$$

$$5c = 02413,$$

$$5e = 04321,$$

$$5d = 03142,$$

$$25be = \Sigma x^2 + (\beta^4 + \beta) A + (\beta^3 + \beta^2) B$$

$$25cd = \Sigma x^2 + (\quad) B + (\quad) A$$

$$25(be + cd) = 2 \Sigma x^2 - \Sigma xx_2 = -5 \Sigma xx_3$$

$$5(\quad) = - \Sigma xx_2, \text{ as in IT.}$$

Proof that $bede$'s, for instance, are Independent (as stated) sextuple permanents, and that block double triplets are quin-sextuple, decuple, and permanent.

$$625bede = (\Sigma x^2)^2 - \Sigma x^2 \Sigma xx_2 + (3AB - A^2 - B^2 (= 5AB - (\Sigma xx_2)^2)), \text{ in which } AB \text{ is the only variable.}$$

A (and B) numbered 12345 (and 678910) in the following table, by the permutations of x_2, x_3, x_4, x_5 (sliding permutations with the sequence unbroken, 12345, 23451, for instance, disturb nothing, which reduces the 120 to 24) becomes

12345	12489	14678	13578	138910	134610
VI	356710	678910	III	24567	246910
X	II	25789	VIII	V	235910
XII	VII	IV	XI	IX	I

with but SIX pairs (repeated), I VIII, II VII, &c.

The blocks, numbered, become by permutations of x suffixes,

1234 in 5b	1	2	3	4	5	6
43	2	1	4	3	6	5
342	3	6	5	2	1	4
24	4	5	6	1	2	3
423	5	4	1	6	3	2
32	6	3	2	5	4	1
2341	5	2	3	6	4	1
14	6	1	4	5	3	2
413	1	6	5	4	2	3
31	2	5	6	3	1	4
134	3	4	1	2	6	5
43	4	3	2	1	5	6

in SIX pairs of threes, also permanent, repeated, then the twelve repeated inverted.

Sliding permutations give five such tables, ten (twelve times presented) block double triplets.

&c.

$5b = 01234$	$= 01234$	$5c = 02413$	$5d = 03142$
$5b = 01234$	$5c = 02413$	$5e = 04321$	$5d = 03142$
$5d = 03142$	$5c = 02413$	$5e = 04321$	$= 04321$

$$125() = \Sigma x^3 \quad \Sigma x^3 \quad \Sigma x^3$$

x^2x_2 $\left| \begin{array}{ccc} 1 & 1 & 2 & 3 \\ 1 & 2 & 4 & 3 \\ 3 & 2 & 4 & 4 \end{array} \right|$ (3 sets of $\beta, \beta^2, \beta^3, \beta^4$) equal to $-3 \Sigma x^2x_2$.
 for instance

xx_2x_3 $\left| \begin{array}{ccc} 20 & 11 & 22 & 10 \\ 20 & 04 & 03 & 10 \\ 33 & 04 & 03 & 44 \end{array} \right|$ (0, 1, 2, 3, 4, vanishing four times, leaves 4 β^6) equal to 4 Σxx_2x_3 .
 for instance

$$\begin{aligned}
 4 \Sigma x^3 &= -12 \Sigma x^2x_2 - 24 \Sigma xx_2x_3 \\
 \text{Add } -3 \Sigma x^2x_2 + 4 \Sigma xx_2x_3 & \quad \Sigma x^2x_2 = \Sigma x \Sigma xx_2 - 3 \Sigma xx_2x_3 \\
 125() &= -15 \Sigma x^2x_2 - 20 \Sigma xx_2x_3 = 25 \Sigma xx_2x_3 \\
 5(b^2d + bc^2 + ce^2 + d^2e) &= \Sigma xx_2x_3, \text{ as in IT.}
 \end{aligned}$$

The remaining coefficients, following suit, give us back IT.

When $n = 6$, $x^2 = (b + c + d + e + f)^2$

$$(x^2 - 2bf - 2ce - d^2)^3 = (b^3 + c^2 + f^2 + 2bc + 2bd + 2be + 2cd + 2cf + 2df + 2ef)^3,$$

bringing us back at length to IT.

When $n = 7$ (with six β 's), again we get IT.

&c., forever.

III.

Reductio ad absurdum.

x^n , equal to nothing but *itself*, is equal to something which is *not* a perfect n th power (of x), in IT.

The n th root of both sides of $x^n = x^n$, IT, is *not* x (or x_2 , or x_3 , &c., or x_n) = x , or x_2 , or x_3 , &c., or x_n .

Raising the n th root of both sides of IT to the n th power does *not* reproduce IT.



I (which may be made general), II, III, are indirect Proofs, I, II, being backward, Inductive Deductive, which III completes, and carries them on, till $n > \infty$, is *reversed* (the only way n can exceed ∞ , coming back from the farther end of ∞ where they are together, past 0, it's hither end, where ∞ stops), and becomes -1 , &c. (when IT is *reversed*, divided by its first and last term, the sign of Identity keeping its place (after x^{-n}), and every $+$ becomes $-$, every $-$, $+$, in IT's exponents, Σx^{-1} being significant), then till $-n < -\infty$.

[The return of ∞ 's to $\sqrt{1}$ is also illustrated by $x^{2n} + y^{2n} = 1$, which, when $n = \infty$, is the equation of a square with the four points at its corners rounded off, the side of which is $+$ and -1 .] The double equation ($x^n + x^{-n} =$) gives $x + x^{-1}$. Fractional exponents in IT, reduced to a common denominator, add no difficulty. Irrational exponents, with their roots corresponding in separate sets, may make IT infinite, multiple, with imaginary branches. IT may also be ITself a root.

The n th root of both sides of IT is what Plato wanted, an IDEA which is both Particular and General at the same time.



The Sixth has permanents (lowest in multiplicity), $(x + x_2 + x_3 - x_4 - x_5 - x_6)^2$, $xx_2x_3 + x_4x_5x_6$ with ten values;
 the Seventh, (multiple solutions and) permanents, with $\frac{7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1}{7 \times 6}$, 120;
 the Eighth, $(x + x_2 + x_3 + x_4 - x_5 - x_6 - x_7 - x_8)^2$, $xx_2x_3x_4 + x_5x_6x_7x_8$, with 35;
 the Ninth, $xx_2x_3 + x_4x_5x_6 + x_7x_8x_9$, with 280;
 the Tenth, with 126;
 the Eleventh, of the eleventh degree also (for instance), with

$$x^6(x_2x_3x_4x_5x_6 + x_7x_8x_9x_{10}x_{11}) \text{ or } x(x_2^2x_3^2x_4^2x_5^2x_6^2 + \&c.) \text{ for their first double term.}$$

The n th has $(n-2)(n-3) \&c. \times 2 \times 1$ (multiple solutions of the first degree when n is prime (others, sometimes, when n has factors), Form Constants (one for each degree of x in IT's Identical Equation of which they are the literal coefficients), and Independent multiple permanents of every form and degree whose highest multiplicity is that of IT's ν 's.



x cannot be written with only $x\Sigma$'s if IT's lowest multiple permanents (the stream) have more than n values (the fountain).

AB double triplets,

	1	12	1	12	1	12	1	12	1	12	1	12
	2	23	2	23	4	45	3	34	3	34	3	34
A (or B)	3	34	4	45	6	13	5	51	8	35	4	45
	4	45	8	35	7	24	7	24	9	41	6	13
	5	51	9	41	8	35	8	35	10	52	10	52
	6	13	3	34	2	23	2	23	2	23	2	23
B (or A)	7	24	5	51	3	34	4	45	4	45	5	51
	8	35	6	13	5	51	6	13	5	51	7	24
	9	41	7	24	9	41	9	41	6	13	8	35
	10	52	10	52	10	52	10	52	7	24	9	41

(in which the x 's are understood, 12 meaning xx_2 &c.), numbered, become by x suffix permutations

Sliding permutations give Five such tables, ten (six times presented) double (p) p 's, in which $[1 + \Sigma(2 + 3 - 4 - 5 - 6)]^2$, $6[1 + \Sigma(2 + 3)]$ (repeated) =	123 26 56 35	36 35 45 64	54 52 32 52	42 43 63 26	and do not disturb this Quadruplicity : others break it up.	1	2	3	4	5	6	I
						2	1	6	5	4	3	
						3	4	5	6	1	2	
						4	3	2	1	6	5	
						5	6	1	2	3	4	
						6	5	4	3	2	1	II
						6	2	1	3	5	4	
						2	6	4	5	3	1	
						1	3	5	4	6	2	
						3	1	2	6	4	5	
						5	4	6	2	1	3	III
						4	5	3	1	2	6	
						4	2	6	1	5	3	
						2	4	3	5	1	6	
						6	1	5	3	4	2	
						1	6	2	4	3	5	III
						5	3	4	2	6	1	
						3	5	1	6	2	4	
						3	2	4	6	5	1	
						2	3	1	5	6	4	
						4	6	5	1	3	2	III
						6	4	2	3	1	5	
						5	1	3	2	4	6	
						1	5	6	4	2	3	

obviously double quadruple (palindrome) p 's (each thrice presented), $(1 + 2 + 3 - 4 - 5 - 6(150xx_2xx_3 \text{ products}))^2$ and three others, roots of an equation of the fourth degree (with only AB's in its coefficients), which, if it could be WRITTEN, could be solved, giving single triplets next, $(1 + 2 + 3(75xx_2xx_3 \text{ products}))$ and seven

others, by the solution of four equations of the second (sum constant, difference given), eight equations of the first degree (of AB), which by elimination give the six AB's ($25xx_2xx_3$ products in each), then the twelve A's (and B's) (A + B constant, AB given, in six seconds), ($5xx_2$ products in each), twelve equations of the first degree (of xx_2), which give by elimination the ten xx_2 's, and Five x 's ($=\sqrt[3]{\frac{xx_2xx_3xx_4xx_5}{xx_2xx_3xx_4xx_5}}$, &c.) in the General Fifth (!)

This has no b in it, and is a (single) subsolution of the third degree (gives Five x^3 's). Pursuing this I found the sextuples, and when least expected, the n th root; and, pursuing that, find this. This does not rise above the $(2)^5$, the 32nd (of x), making up in terms what it lacks in degree. A double triplet, of the 4th (of x), has 30; how many its eighth power, in the first equation? $[(150)^2]^4 = 256,289,062,500,000,000$ (!) is the xx_2xx_3 Corrective Test.

Four is the number of independent x 's in IT (when $n=5$), but can be chosen Five different ways, a multiplicity which AB double triplets have got rid of, having Left it In the Sliding Permutations.

Whether the low p 's of the Sixth (ten) find in the tenth a case reducible to the Fifth, is a question demanding Observation of tables with 120 rows of numbers (for 120 suffix permutations), 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, being the first. Each number requires us to look among 120 columns, numbered, for a match, ($\frac{1}{2}$ (doctrine of chances) of 1200×120 examinations). The table just given was two hours' work. At ten a minute, the said examinations, *unless simplified*, would require 120 hours, to prove an Affirmative.

$x^{\sqrt[3]{3}} + 3x^{\sqrt[4]{5}} + 6x^{\sqrt[5]{2}} + 4x^{\sqrt[6]{1}} + 2x^{10} = 5$ (for instance) means 120 equations, all infinite;

$x^{\sqrt[3]{3}} + 3x^{\sqrt[6]{5}} = 5$ means six and =

$x^{\sqrt[12]{27}} + 3x^{\sqrt[123]{25}} = 5$,

in which 123 and 12 mean that the first three roots and the first two, respectively, only are taken.

$x^{\sqrt[6]{27}} + 3x^{\sqrt[6]{25}} = 5$

is the simplest of the six, in which the exponents, integers followed by infinite decimals, become commensurate at the end of ∞ because they go no farther; and all but three coefficients are zero.

The first three of $\frac{1}{-1} \left| \frac{\beta}{-\beta - \beta^2} \right|$ are above the horizontal; the first two, before the vertical line, because the negative roots were admitted in squaring; the imaginary, in cubing (wives and children).

$\sqrt[12]{}$ gives $\frac{1}{\beta} \left| \frac{-1}{-\beta} \right| \frac{-1}{-\beta^2} \frac{-\sqrt{-1}}{\sqrt{-1}} \frac{-\sqrt{-1}}{\sqrt{-1}} \frac{-\sqrt{-1}}{\sqrt{-1}}$, with four divisions. The field is exhaustless. Every new opening shows something larger. You pass the bluff on a virgin lake which bounds your vision—and its mirrored inches change to miles. You look behind to where you marked it—how the bewildering vista dwarfs the background! What could be simpler than $\sqrt[n]{x^n}$ (14 pages)? Who shall first declare the multiplicity of the lowest p 's when $n = 100$, for instance? He must be a master-simplifier. There *is* a rule; and it is simple—or else their number is not expressible in numbers (*reductio ad absurdum*).

[I introduce here — it doesn't belong here — for illustration, the Pythagorean Proposition, largely stated thus, Proposition. Any figure constructed on a(n ultimate) hypothenuse is equivalent to the sum of its similars on their corresponding lines about the angle(s) not adjacent (to the h.).]

Definition. Similars are the same figure (imagined or) drawn on different scales.

Axiom. The r(atio)s of two figures are independent of the scale.

Construction. Drop the perpendicular(s).

Proof. $r(1) + r(2) = r((1) + (2))$.



[This applies to three circles (for instance) of which the sides are (corresponding) chords, to part polygonal, part curved, reëntrant-perimetered, plane and warped surfaces, in space, &c., &c.]]

When a boy I discovered $\pi = 2^n \sqrt{2 - \sqrt{2} + \sqrt{2} + \&c.}$ (with $n(=\infty) \sqrt{s}$), $\pi^2 - \&c. = 2^{(2^n)n+1}$, and showed it to a friend, in the American Nautical Almanac office, Simon Newcomb, — an illustration of infinite IT.



Errors great and small throughout this paper must be forgiven, and kindly corrected by brother amateurs (Amavi) and professional algebraists. The work was new, and the IIII proof discovered, December 6th, just as The End, on page 14, was going to press.

Unless simplified are the saving words in the last ¶ on page 16, which, being in type, I will let stand for a monument, only going back to underscore them. I have done two-fifths of the work in two hours, and got my fill, 12, of double quintuple *p*'s—30 in number.

I have also *found* a Quintuplicity in the Sixth and lost it again (in such a mass of ink and pencil unnumbered pages), having just turned back to look for it after twenty days' writing, figuring and wading, through the complexities that crowd upon me, and for the past week under water. I soon began to date and number; and, knowing algebra now, can do it again, I believe, an easier way.

There is a beautiful line in the Lay of the Laureate, for which I forgive him half his weakness, which applies to a flower (of Science) and to IT.

“Flourisheth and fadeth not!”

See how he spoils it!

(There was a time)¹ when all my youthful thought

Was of the muse, (and of)² the poet's fame,

(How fair)³ it flourisheth and fadeth not,

(Alone enduring)⁴ when the monarch's name

Is but an empty sound, the conqueror's (bust)⁵

Moulders and is forgotten in the dust.

1 is an expetive ;

2, a still-born 1 ;

3, an *indirect* question — I thank thee, my dear Professor, George M. Lane, for teaching me that word, and unteaching me, at my request, *my* Latin, scratching it repeatedly till I got something you couldn't scratch ! — of taste, flourisheth, from flos, meaning a flower, and reduces the degree of sublimity which follows ;

4, not true, *God* enduring also ;

5 is the step from the Sublime which corresponds (in poetry) to the *reductio ad absurdum*, conquerors, when they "bust," being of no consequence.

It is not easy, after taking down a ruin, with the broken bricks, to build Saint Peter's. With a noble prospect, three splendid towers, let me build something !

The manly purchase of my youthful tho't

Was of the muse's wisdom and domain,

The realm which Flourisheth and Fadeth Not,

And coin enduring when the conqueror's gain

Is but an empty sound, the monarch just,

With mortals mixed, or labelled, Royal *dust*.

—The page was so much soiled and pencilled up I didn't know it.

12 + 34 + 56
35 46
36 45
13
24 56
25 46
26 45
14
23 56
25 36
26 35
15
23 46
24 36
26 34
16
23 45
24 35
25 34

12 + 34 + 56
 + 12 + 35 + 46
 + 12 + 36 + 45, a P (for instance), having Five values in each Q;
 12 + 34 + 56, a p (for instance), three, in each of five equations;
 12,
 1,
 an *underpermanent* (for instance), three, in each of the fifteen;
 an *x* (for instance), SIX !

is the Quintuplicity which stands the
 (120) suffix permutations of Six *x*'s,

23	456
	65
	564
	46
	645
	54
4	563
	36
	635
	53
	356
	65
5	634
	43
	346,
	&c.

Sliding permutations give
 SIX such Q's, each with
 four-fifths of the fifteen
 triplet *p*'s regrouped.

The Subsolution rises to the 90th degree (of x), P^s , with multitudes of terms, in its successive stages,

$$\begin{array}{ccccc} u & w^3 & p & P & P^s \\ 3' & (3)^3 & III' & FIVE' & (FIVE)^{FIFTH'} \end{array}$$

$(3)^3(3)^3(5)^3 (= 2278125$ in $P^s = P^4SP - \&c.)$ being the xx_2 Corrective Test.

THE INTEROCEANIC CANAL.

The patriot's dream who sails alone

Through seas of unexplored time

Hath claimed the Isthmus for Our Own

In distant days unknown to rhyme —

Who claims it Not *hath dreamed A CRIME!*

Charles W. Eliot, my friend, for many years — for many years may he not cease to be — the President of Harvard University! has said, in a master speech to the Massachusetts Teachers' Association, printed in the Boston Morning Journal, November 29th, 1890, and other newspapers, which ought to be distributed by Congress, that mathematics taxes but little the Observing or the Reasoning Powers, much the Memory. This ought to suit him! If there is any faculty or Organ of investigation of use to students that is not taxed hereby, I haven't got it. It is, indeed, (the) Natural History (of Algebra), P 's being facts, not truths, which call for eyes (observation behind them); Nose,

for the track, in the wild thicket; fingers, to point three ways at once at passing game; and hands, to hold the horns together for comparison; memory, to keep from taking the back track too often, — and Imagination! Eliot. Staying powers! I might have added; and the spirit — I know no German — that *will never be denied*. I long to benefit the dear boys, and have taught school. In one of my classes was the youngest son of Boston's best known millionaire shopkeeper, who has had charge since, during his father's absence, of the Establishment. I used to ask him, every morning, what the eighth part of a hundred (cents, for instance) was, and, getting no answer, tell him to ask his mother. What ailed that boy? He knows a quarter of a dollar, when he sees it, I warrant! I was complained of to the School Committee for letting my pupils, in my presence, add two columns at a time. What ailed the head-master? And how is the teacher to please everybody and teach? An elder brother of the said pupil, when I was a substitute college tutor, had proved his geometry on the blackboard, when I stepped up, rubbed out his A, B, C, and substituted for them 1, 2, 3. He couldn't prove the proposition again! What ailed his teacher? He was singing to himself,

“Takee off a coat, boys, rollee up a sleeve;
Jordan am a *hard* road to trabbel, I believe!”

I can remember when I was in the American Nautical Almanac office in Cambridge, calculating lunar distances at the age of seventeen, adding seven-place logarithms sideways by threes and dreaming day-dreams at the same time, how a brother computer would exclaim — “What a habit a man gets into of building castles over his work!” And when my distances in column came out wrong, and wouldn't difference, and I was in for it, how my friend, Truman Henry

Safford, lightning-computer, would take the Sheet and run his Nose along from the bottom upwards, till in an instant, — he had the error! Those were happy days; and Genius sat in that little room, at mouldy desks, with the dust an eighth of an inch deep in the corners. How Brad. used to flirt his handkerchief at passing girls! and how I beat him at chess, The Champion! in a set match, with eight competitors, a clean wipe-out, three games running, soon after learning the moves, according to Newcomb; and won the prize! I have it yet, Stanton's Chess Problems, but have half forgotten the game. Brad. never meets me, after many years, without smiling all over! — of boyhood! No bitterness! no *breakdown*! no DISAPPOINTMENT! "Simon's a splendid mathematician!" Brad. used to whisper, in his husky roar to me; "but I don't dare to *tell* him of it," — &c. I walked out from Boston, the thermometer 20° below zero, over the bridge, and froze my ears; and while I was walking, a radius was revolving in my head, jointed at one end to one end of another, also revolving (with the other end fixed), in the opposite direction in the same time. I showed it to Simon, asking him what curve the free end of the first described. He wrote right off some simple characters, without hesitation, and in half a minute answered, "An *ellipse*, of which the major and minor axes are," &c., &c. When I showed him the π , he figured, obtained the form $\infty \times 0$ (!), and then said — I remember every word — "I don't know enough about Finite Differences to do it." How I wondered that he didn't! I was trying to think out the Catenary equation, riding in a horsecar, with a friend. "*There it is*," said he, showing me the prize in his Calculus in hand. "How much that boy must know!" — a civil engineer now — I said to myself. One thing, perhaps, he didn't. You can have a better wrestle with the Unknown Angel of Truth than you can with the vestment(s) which some one has first compelled him to leave behind, to make good his escape; and Exercise, for its own

sake, physical and mental, was what I ached for. When I climbed that hill under a blazing sun, in the White Mountains, in '61, and the athlete of our class rolled over at its top, exhausted, while I stood up, how I exulted without showing him my satisfaction! There is something coming back lately, *of that old vin*, I have despaired of for twenty years. I must tell my story before I get through, and really feel I was never quite so well in my life. I can hark the step of Glory now without that tingling in the substance of the brain that used to warn me! There is no pressure in *either* ear! An equation which crosses me just now must look out for ITself!

ReDiscover is a slow process, quite unnoticed and unrewarded, a "waste of time," till one can write the *re* reversed, at the end of the word to which it belongs, and read, Discoverer! "*The next!*" as the tutor used to say in college recitations.

AN AUTOBIOGRAPHY IN RHYME.

1. { By Nature's portals to a world of sin
In March of '41 I entered in,

And from that venture, for which God be thanked,
Was duly nursed, and fed, and spoiled, and spanked,
Till at the age of four I went to school,
That I might learn to be "not quite a fool,"—
My father's motto; for my homely verse,
It might be better, and it might be —.

My opportunities improving well,
I early learned to read, repeat, and spell,

And figure on my feet and in my head

How many sheep the pastor had, who said :

“ If twice as many, half as many more,
And half of five, I had, I’d shear a score,”

From which I argued there, to earth and Heaven,

He must have had no more nor less than *seven*;

While half the elder boys with envy burst

To see the little redhead standing first,

Whose half-contempt and friendship — by the powers! —

Were mixed with mutual punchings after hours

Till one spoke up and said he’d bet on *me*;

Another, he’d *no business* with P.

From early grammar to a higher school

I went, my father’s son, “ not quite a fool,”

The season’s quota, and, if only one,

To half-a-dozen equal, not in fun,

But quite in earnest, spake the master grim :

It matters nothing what I thought of *him*,

Who soon a county sheriff did become,

To *execute* his charges — heigh-ho-hum !

Whom they that practise and whom they that preach

No other law of Righteousness could teach.

When I had fairly earned the valedic

The other boys were told to take their pick,

And picked an older lad, of dusky poll,

Preferring his complexion on the whole,

Whose thrifty eyebrows met athwart his nose :

Fast friends we were ; nor had he any foes.

These great events occurred in fifty-seven,

And I the next year sought the Way to Heaven.

By all my comrades praised, and none despised,

I in the coming spring was then baptized,

With due contrition for my early sin,

And promise oft repeated to begin

The life the parson dear described so well,
By which we might avoid the Way to —.

My simple speeches did not quite recall
The sharp repentance of th' Apostle Paul ;
But if I struggled less t' escape the clutch
Of Satan, I had hardly sinned *so much*.

How first in Latin and how next in Greek
I soon could read, and write, and think, and speak,

I half remember, but to college came,
Determined there to win Eternal Fame,
If fame it were : in four years more I led
A goodly class of youth, their easy head.

And next, enchanted, in the ways of Love,
Our earthly hope and comfort from above,

I wandered oft, but did not walk alone ;
Her name was Mary, and Her wish my own :

How many times She kissed me, while you hark,
I ne'er could reckon : for an older spark

She jilted me at last, with smaller feet

And larger fortune, did my Rosy-Sweet !

Her father was a miser, gruff and grim,

And long of purse as he was short of limb ;

In after years he spent some days in bed,

And then was seen no more, the neighbors said.

It was a brave, a man of war, you see,

That took my Treasure : between you and me,

I wrote him word to choose his weapon well,

And give the Lady Fair a chance to tell,

As near as any single woman can,

Which of Her suitors was the better man ;

And when he answered not by tongue or pen

A single word, I challenged him Again !

He had the prize, which soon he made his wife,

And thought, no doubt, Herwith to save his ——.

Meanwhile, to find the fire and boil the pot,
And pay the cook to keep the coffee hot,

I taught and wrote awhile, and tried the law,
Begun and ended many a bankrupt war,

And thought — the reader will concur with me —
Forty-five hundred was a healthy fee:

For better some may sigh in vain; for worse,
Let those who like it try their luck at verse.

And for my recreation at the time

When single manhood seeks a hardier clime,

I fed my passion in the mother-wood

For bear, and wolf, and bucks, still fresh and good,

An otter, beavers, ducks cut through the head

With each one rounded slug of charnèd lead,

As they were swimming where I paddled through

In our two-fathom, bright, birchbark canoe,

And fourteen moose, some tilting half a ton, —

A rather goodly list of game for one!

And now in middle age am ready yet
 For almost any task that fate can set;
 50 ! { With heart and strength for every earthly strife,
 { Afraid of nothing, and untired of — Life.

I never had a moment with Her (present or absent), however Intoxicating, which was unhallowed [Even when I drew the lock of hair which She had given me from Her dark-brown abundance, in my tutor's room alone in Holworthy, across my nostrils, and its natural perfume thrilled my being, and tried the linen collar and butterfly pin-cushion Her hands had made for me — and was happy. My dear Professor, last above named, was out on foot. We were out driving, with my sister, when we met him. I shall never forget his smile, nor Her eager inquiry, "Who is he?" She was how ravishing! that afternoon. I had given Her flowers, and She was *wearing* them — there was heliotrope, you may be sure! Half springing from the seat beside me and half turning to my sister behind us at the same time — a bounding beauty — She exclaimed with exultation, "Heliotrope means '*I love you*'!" I may forget; but that ride — never! What She repeated with such triumph, I told Her that night — She knew it well — unknown to my sister, on Her doorstep, and again thereafter — how many times? and believe now I told the Truth. I had had an offer, through dear Doctor Hill, to go to China (three English, three Frenchmen, three Americans — one from each of our leading colleges — to learn the language, with leave of absence at the end of five years, £2000 a year in prospect, in the Customs Service under Mr. Hart), and had accepted. I was too old, however (90 days (!)); however Reproachful, which I might not have had with an Angel, and cannot recall with Absolute Self-Approval, in matter of

honor. The Go(1)d in us, which is creative, cannot soil ! This has been through the fires of my lifetime without losing a carat ! — Is it dross ? — My Courtship, my Wedding Night, my Joy thereafter ! The First was Real ; the Second and Third were Imaginary, like the three third roots of 1.

Can (Will) God interpret to us the Imaginary ; and if never, why hath HE put its Algebra into our lives ?

1.

Brow of heaven, and lips of love,

Never mine from them shall part

Till I all their sweetness prove :

Pity thou my aching heart !

Kisses *are* a fleeting bliss ;

Grant, O grant me yet a kiss !

 β .

Stars were shining overhead ;

All the sounds of night are still :

Love hath found thy lonely bed ;

Naught but love my soul can fill :

6	DO -	RE -	MI -	RE -	MI -	FA -	SOL	
8	$\frac{1}{4}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{8}$	$\frac{3}{8}$	

Maid of more than mortal charms,

LA -	SI -	DO -	SOL -	MI -	FA -	RE -	DO	
$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{8}$	$\frac{3}{8}$	

Tā-ake, O take me to your arms!

β^2 .

Soft the sleeping dove respires;

And her breath upon my cheek

Kindles all my heart's desires:

Not a word my lips can speak!

Will she fade nor fare away

When the Darkness turns to day?

When $n = 7$, we have

A	B and C	
12	13	14
23	24	25
34	35	36
45	46	47
56	57	51
67	61	62
71	72	73

ΣAB and ABC , tabulated, disclose a certain multiplicity.

When n has factors a simplest sub can always be found.

When $n = 11$, we have

D	and	E	also, and $A\Sigma$'s and continued product.
15		16	
26		27	
37		38	
48		49	
59		510	
610		611	
711		71	
81		82	
92		93	
103		104	
114		115	

When $n = 13$, we have F also.

&c. FOREVER.

This is Absolute Algebra. I cannot write it, or think it, all; it is too large! but I *believe* it; and I want to get up, and have been trying all my life, out of what I *think*, to what I BELIEVE! How hard that is to a man of my constitution, one of God's sceptics, is incredible. I could never receive the smallest statement from my pastor even, or my dear parents, about God or being, without a question. Might not God, I asked, silence his sceptics, by some self-evident communication, — a hand in the sky, for instance, at Christmas time? The hand is visible enough to me this Christmas-tide; and I have consecrated myself, here and Hereafter, to God and TRUTH; TRUTH first, God second, mankind third, and self, except for purposes of (i)dentification, *not at all*! It is every man's privilege and duty to become a Christ. We have known one in our age, my friend, James Freeman Clarke!

thi (as in *thine*)
ith

Boston, CHRISTMAS, 1890.

A NEW PRONOUN (ITH)! A *hit*! isn't it? (Sliding permutations, with the sequence unbroken, disturb nothing.)

If I found a fellow-being in distress, and thought I could do it with any good, it wouldn't make any difference to me what it *had* done; I would take it with hurt tenderly in hand, and, if possible, extract the thorn.

It is dative, nominative (iths is genitive), and might be accusative or ablative *man, woman, or child*; civil or savage; wild or domestic *beast or bird*, &c. Will London Times please copy?

The shortest letter ever written (Do you see the point?) in prose¹ and verse.

¹ First published in the autumn of 1879 in the *Utica Observer* with my name to it by a friend and correspondent in *Utica* for whom, at his request, I had composed it. There is something in it!

Quiz Jack; thy frowns vex G. D. Plumb!

A Better Case Did Ever Fancy Get?

Here is Juristic Knowledge Little Met!

No Old Pugnacious Querist's Reference See

Twice Underscore (?)!

—It is not all Algebra: it is part Prophecy (and purpose, which is half-brother to it, and knows its duty, the father being the common wish; the issue, the common weal. (The Patriot's Dream.) Everything worth having (Love, and), Life itself (for instance), is a dream. There is no life in a fact (*reductio ad absurdum*); and experience is but death diluted. We are *older* for it.), — part Penetration, Pierce (pronounced Purse), when a verb, meaning to Penetrate; and when a proper noun, in Boston, with or without relationship, meaning Mathematician.

—It is Inductive Deductive. He who has named it, with the right of a father [in (the twentieth century)], has named a philosophy that will outlive (), has taken Aristotle with one left hand, and Bacon, with one hand left, and will walk through the schools unquestioned, always answered. The Age of Steel is yet upon us; the next Age will be the Diamond. The empirical winged to catch the Infinite, is the Philosophy of the Future. Nothing is more tedious than pure induction, finding by trial, fact and law [If any one doubts, let me give an example. Write

seven squares with the nine digits, each to read off three ways in each of four directions, horizontal, vertical, on both diagonals, eighty-four ways in all, and all unlike,

1 2 3	read also	1 4 7	1 5 9	1 6 8
4 5 6		2 5 8	4 8 3	2 4 9
7 8 9,		3 6 9,	7 2 6,	3 5 7,
				being the <i>first</i>];

nor, on the other hand, than pure deduction, logic, and geometry, with its Bridges, its Asses, and its generalization, the Virtue of it, so conspicuous by its absence. The new philosophy hath a new weapon, Paradox, which shapes ∞ (Everything worth knowing is a contradiction. Duality, two souls, father's and mother's, uniting in one, the child's; Trinity, — are paradoxes. Christ was visible; the Holy Spirit is invisible; God, the Visible Invisible, holding us up to TRUTH, TRUTH up to us.), cuts — did I say it? — into the Possible Impossible. The Absolute Impossible remains untouched, except in a madhouse, where 2×2 is often 5, foundation TRUTH. The word Napoleon cut out of his dictionary, without caring what he cut into behind it (impolite and impolitic in mine), the word he was (in French), the word in Russia that was too much for him, — was *ours*. TRUTH is the only thing not contradicted. No FALSE TRUTH! False Gods are common, P's whose co-efficients are not all constant, leading, all, however, to ONE that IS.

My printer still says he wants a back to this, to hold the title; and, he being a good one, I will back him up to the extent &c.

In AlGeometry (AlGeo), my new science, which is nothing if not progressive, Particular General IT may be written,

$$\begin{aligned}
 x^{2 \times 3} \quad (\text{for instance}) &= -x^{2 \times 3-2} \sum \begin{array}{|c|} \hline 12 \\ \hline \end{array} + \&c. \\
 x^{3 \times 3} &= -x^{3 \times 3-2} \sum \begin{array}{|c|c|} \hline 123 & \\ \hline \end{array} - \&c. \\
 x^{3 \times 5} &= -x^{3 \times 5-3} \sum \begin{array}{|c|c|c|} \hline 123 & & \\ \hline \end{array} - \&c.
 \end{aligned}$$

[I only give illustrative terms], which leads directly to the simplest subsolutions of $x^{n_1 n_2' n_3' n_4'} = -x^{n_1 n_2' n_3'-2} + \&c.$

This opens a Subject. Peirce, at the entrance, met x 's ancestor, one of my P's, mistaking it for an a , ($\sqrt[3]{1}$, $\sqrt[3]{1}$); and it floored Him. See my friend's, Dr. B. A. Gould's, *Astronomical Journal*, 1861, in the Boston Public Library (in two books, Vols. I, II, III, and IV, V, VI), Vol. VI, p. 169. The Doctor was my scientific patron in college,—I had a literary one, my friend, the late lamented Thomas Bulfinch, who taught me always to scratch "*the devil*" in my compositions, and write, "*Satan*"—giving me tables of micrometer star observations to average. The women-computers, he informed me, averaged two an hour, for which he paid them 30 cents, a "fair" equivalent. I don't know how much they cheated him; I earned *two dollars*. I never told him—he often asked me—how fast I worked, until about a year ago.

PEIRCE'S "CYCLIC SOLUTIONS OF THE SCHOOL-GIRL PUZZLE."

Fifteen girls walk every day by threes, no two together twice.

<i>The operation by which one day's arrangement is</i>		Disproof (of His statement, in My Italics).
<i>changed to the next is the $\sqrt[3]{1}$ ($\sqrt[3]{1}$ in general).</i>		

It is not true, either in general or in particular, and shows how little He understood the Real or the Imaginary. Interpretation was not His province, which was the orbit; and He never came nearer to us than 240,000 miles! He Himself owned His limitations, urging us to follow — He did not say, invent — some New Analysis. He was "too old," He said, too long accustomed to the old methods.

After long seeking, ALGEBOMETRY!

He who discovers a spot on Sirius will be rewarded, undimmed the brightness of the star.

FRIENDLY CHALLENGE.

He left a son, my friend, Professor James Mills Peirce, in His Perkins Chair, in charge of the Mathematical Department of Harvard College, willing and able to upset me, if I do Him injustice (to whom I particularly address this exposition, and shall send first), who came to me, in '65, with the offer of a tutorship, and the remark, "I suppose you intend to devote yourself to science!" I didn't see a living for Two in it, the Σ laid down for me, between

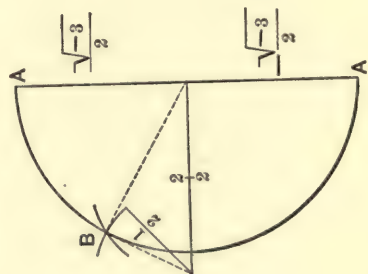
my Hope and Realization, being "\$6000" per annum, at the lowest (!). "*Perhaps, George, a Professorship in Harvard College*" (!) I was *too young*, could not wait twenty years; I wanted *offspring*: when I thought of it again, a year ago, I was "*too old*."

I have been looking all my life to find something I was neither too young nor too old for; and have found IT.

$S = 12 + 34$ It is not true in the School of Four, in which His operation, *not* $\sqrt[3]{1}$, is merely the welcome $S_2 = 13 + 24$ of S to S_2 and S_3 to become roots of the same equation, $S^3 = S^2 S - \&c.$ $S_3 = 14 + 23$

The $\frac{\sqrt{-3}}{2}$, the imaginary in $\sqrt[3]{1}$, $\left(\beta = -\frac{1}{2} + \frac{\sqrt{-3}}{2}, \beta^2 = -\frac{1}{2} - \frac{\sqrt{-3}}{2}\right)$, means change of position in two directions. A, the extremity of the twice hypothenuse.

1 2, the same as 2 1, (for instance), in the table, occupying only a point between 1 and 2,



The 2 in 12 crosses the vertical line (imaginary), and goes up and down *equal* distances (+ and -), into 23 and 24;

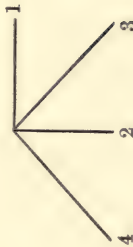
the 3 does likewise;

the 4, also. The $-\frac{1}{2}$ in β might mean that 12 loses half of itself, —but the rule, *unfortunately*, doesn't work on the other side (of the vertical line) !

14	23
12	34
13	24
14	23
12	34

It is not true in the School of Nine, in which His operation is not $\sqrt[4]{1}$.

1 2 3
4 5 6
7 8 9



The three other readings have been given above. Mathematical interpretation never did give $[-]$ as the direction of $+$ changed by a *quadrant*, — and, not to prophesy, *never will* — but by 180° , a double quadrant, to its *opposite*. If we have roots, we need here three imaginaries, equal rotations, for 3, 2, 4, and have but *two*, $\sqrt{-1}$.

This is not trifling. $+$ and $-$ is the Algebra and Geometry of the savage; ours has gained (without interpreting) the imaginaries; that of the Future, He himself said, and it is evident, must be Transcendental! If ever caution is required it is now and here, on the border line, where the path is unseen, and the wood stretches round behind the pole, and down the other side of the earth's axis.

Axiom. The rule which doesn't work in the simplest cases will not work (being broken) in the complex.

The ignorance of great men is overwhelming because it is the exterior of a concave of immense diameter; but I have no patience with Newton when he calls in the Acting God to explain the *speed* of Gravitation. "It is not *scientific*" — I thank thee, my friend, Professor Emeritus, Joseph Lovering, for teaching me that word, in a late

conversation, among the idlers in the Public Garden, on a Sunday evening in June. Laplace (who puts it, *not less than six hundred million times the speed of light*) *was* always — nor with Peirce, who draws back from the Nebular Hypo (which is but a thesis, after all), lest He crowd the Almighty, in the same book of the Astronomical Journal, on the constitution of the Rings of Saturn (fluid, not solid). Singular! no one could see what is seen now, Paradox, the Fluid Solid, a fluid with its particles magnified till they become appreciable, a flight of solids (stones, for instance), the Inductive Deductive, and behind it TRUTH! *God* is not a synonym of human impotence, nor do I *look* for HIM beyond the concave. HE is *in* (with and beyond) us.

— Nor patience either, with any who would veil the Imaginary, or hide behind it; nor with them who fail to grasp ∞ and the finite, and lay them side by side for comparison when TRUTH requires. Two lines which cross have one less point than the same, parallel, to a child's comprehension. Simple, too, is a perfect adjective, coupled with TRUTH, like Pure (which means *unmixed*) with Love; but not with Error, dearest Professor!

Peirce Himself disproved Leverrier, that he ought to have pointed to the other end of the Celestial Diameter, by his own calculation, at his Neptune; and Edward Everett, the President, an unDiscoverer, in '48, in the American Academy, protested against this statement, *from an American*, going on record. What was the american academy for?

After all, Neptune must have been an easy discovery; it was purely Observation and computing! There was no mystery, it being all real, $a\sqrt{1}$.

I have pushed this manuscript along — ideas so crowd upon me — after my three weeks' labor, rather than sort unnumbered and numbered pages, lacking patience; and have left out, no doubt, some science,

IT

IT

an IT ladder, for instance, *adding no difficulty*, in which IT is a root (of a root) (of a root), &c., up to ∞ . It is too elementary, and not quite sufficiently axiomatic. Let some one else try it! The little school-girl comes into my head, some two feet high! prettily dressed, whom I overheard telling her companion with great eagerness, with an open book held between them by little hands, as their owners passed without observing me, the way of Life and Nature almost all before them — “Q, I can do it *a great deal harder way* than that!” I taught the said School (the Public Latin) — and I expected to be punished for it — to add, subtract, and multiply (as well as divide), as I do always, from left to right, fixing the figures *in the order of their importance*, which, with long decimals, and errors a certainty, is a consideration. How absurd to make sure first of a tail end, and then cut it off! I do the same thing in my head in bargaining; and must give here my key to Compound Interest and Annuities.

To find when a sum doubles at compound interest payable semi-annually, at 4 per cent per annum, divide 70 by the rate; at 10, 71, interpolating (adding, and subtracting) for other rates. 70.00

and 71.0 — I have no logs here in my office, nor lexicon, but *Horace* — are more *exact*.

To break the Monotony let us play the Eighth! it's not *work* any longer!

The Multiplicity, which stands the $7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1$ (= 5040) permutations, obviously is

12	34	56 78 57 68 58 67
	35	46 78 47 68 48 67
	36	45 78 47 58 48 57
	37	45 68 46 58 48 56
	38	45 67 46 57 47 56
13	24	56 78
VII ways	V ways	III ways,

the Subsolution coming through the seventh, the fifth, the third, the fourth, the second, down to x , P being of the $7 \times 5 \times 3 \times 4 \times 2$, (the $7 \times 6 \times 5 \times 4$), the 840th degree of x , and the xx , Corrective Test, computable by a child. In TRUTH, Simplicity; I have always felt, I wrote Freeman Clarke, as if I wanted to worship THEE!

The Sixth Redivivus! Ha! ha! Old TRUTH! come back to wrestle with me for the fun of it? Hast thou turned Teacher?

$$\begin{array}{r}
 A_2 \\
 1 \mid \begin{array}{l} 2 \ 3 \ (+456) \\ 3 \ 4 \\ 4 \ 5 \\ 5 \ 6 \\ 6 \ 2 \end{array} \\
 \\
 B_2 \\
 1 \mid \begin{array}{l} 2 \ 4 \ (+356), \\ 3 \ 5 \\ 4 \ 6 \\ 5 \ 2 \\ 6 \ 3 \end{array} \quad \text{the Easier Subsolution!} \quad \text{Hurrah!}
 \end{array}$$

I have always had a presentiment that this could be done! That inconceivable stupidity which sometimes seizes upon a man, and blindness to what is nearest his Nose! — Spent two or three days over it without seeing it!

I am death on the track of Something in the Fifteenth — was lost a week on it, and half gave it up, to return to my writing — and BELIEVE I shall find it yet! And have believed for weeks, there were *many* ways of Subsolving the *n*th, increasing with *n* in number.

$A_2 B_2$ tables, like $A B$, and discloses a Quintuplicity, for sure! The Fifteenth Subsolution seems to involve the Ninth also and the Twelfth! Ha! ha! OLD TRUTH!

The Patriot's Dream who sails alone

Through seas of unexplored time

Hath claimed The Isthmus for Our Own

In distant days unknown to rhyme:

Who claims it Not hath DREAMED A CRIME!

The Isthmus Canal is the Land Ocean, the Inductive Deductive, the Paradox, the Possible Impossible, the Solution !

2	DO - DO - RE - MI		I name home and Country !
4	1/8 1/8 1/8 1/8		

Another Riddle, Mr. Mrs. Paradox ; what animal is it ? Giving it up ? that walks on *its tail* in the morning, *its head* till noon, *its heart* till sundown, and *its back* at night ? Every Discovery, the earth's revolution (for instance), is through Paradox !

Where have the old mathematicians been that they didn't see A_2 ? They *must* have seen it ! And what did they suppose that it was *for* ?

When I asked my friend, Professor William Watson, three days ago $\pm$, in the street, not having met him for years, he told me the Fifth Degree had never been solved (in an elementary way) ; in a transcendental way it had been. I have sent for the 'Transcendental'¹ to try if I can interpret the TRUTH in it. A_{n-4} Subsolves $x^n = -x^{n-2} \sum x x_2 + \&c.!$ and $x^{n^{1/4} \cdot n_4} =$ something, I fear, of no further use to us (being included), except for Exhibition ! The Hundredth now, and the Hundred-and-First, which may end my discussion. I am going by instinct, and have no *knowledge* how this will come out. It is perfectly obvious that—now I'm off the bank that borders the Continent, under the sea, and am down a mile !—It is obvious, I repeat, that fifty x 's [—] fifty other x 's, is an easy permanent !

¹ and have not found it. Will any reader kindly inform me ?

Newton's familiar figure of the boy pebble-hunter, told his feelings; and after him, I suppose, we may tell ours, each in turn. It is my turn now. My brother Mathematicians, Algebraists, if I have earned a right to sit among you, will you not aid me in this Inquiry (There is Something in it!)? And send me figured coefficients for comparison. I feel like a little boy who has swum out to sea beyond his depth, and finding a spot which is a little shoal under him, stands on it, and calls out aloud for help.

I want a boat,
an AlGeometry,

Σ
7(4(3))

1	2	3
4	5	6
7	8	9

for,

Σ

13(7(5))

1	2	3
4	5	6
7	8	9
10	11	12
13	14	15

, *pipeds* (parallelopipapyrons, if that's the Greek, I wonder they were not called!).

O'Connell used them to silence the fishwoman.

P. S. Eureka, the same evening, after a walk in the fresh air! I have found it — how simple! the School-Girl figure, the one of thirteen, which Peirce failed on. If I had looked for it where it was I should have found it the first time. There are 12 others, no three together twice for a quarter, which, in a charity-school of 15 girls (no homes! no vacations!) would work perfectly, four times a year, beginning on the first Sunday in every January. Once in five or six years they would come to grief, and cry like Titus for a week! — Shall I write one, or the 13? It is AlGeo, the figured *Σ 's* (I have struck *figures*, for *digits*, out of My Dictionary, and mean *geometry* — if not encroaching on friendly territory).

We started, I believe, with Algebra. This is the Real, a dance, Peirce didn't understand! The Imaginary, in Science, is not for *imagination*, but for *reason*, to interpret! Imagination Reason, *Paradox*! He was a perfect teacher, teaching *never* — Paradox! He communicated Inspiration!

1	2	3	4	5	6	7
2 3	4 6	5 7	8 12	9 13	10 15	11 14
4 5	5 7	8 10	9 13	10 14	11 15	12 15
6 7	8 10	9 11	10 14	11 15	12 15	13 14
8 9	9 11	12 14	13 15			
10 11	12 14	13 15				
12 13						
14 15						

See how 2 chooses from the 1 column, 3 from the 1 and 2, &c., &c.!

This is a P; and the "operation," a welcome.

1	2	3	4	5	6	7
1 2 3	1 4 5	1 6 7	1 8 9	1 10 11	1 12 13	1 14 15
4 8 12	2 9 11	2 12 14	2 13 15	2 4 6	2 5 7	2 8 10
5 10 15	3 12 15	3 9 10	3 4 7	3 13 14	3 8 11	3 5 6
6 11 13	6 8 14	4 11 15	5 11 14	5 9 12	4 10 14	4 9 13
7 9 14	7 10 13	5 8 13	6 10 12	7 8 15	6 9 15	7 11 12

This is an Immense Science; but I virtually promised I would not perform any longer. I could play with P's forever.

Peirce closes thus. "The cyclic recurrence of forms, in which the formal law is evident, although this law is far different from all the usual manifestations of causal connection, may have its application to similar phenomena which are familiar in the organic world."

Fudge!

There is nothing organic in the Puzzle but the School-Girls. Quadrilles, quintilles, sextilles, and reels innumerable, there may be. If He was right He didn't prove it ($\sqrt[3]{1}$, $\sqrt[3]{1}$). It was dictum! He didn't even, perhaps He couldn't, write a week out!

I mark Him 8 on a scale of 8 in this post mortem examination! the credit, we believed, he used to give us when we failed.

The first and last rattles of the Hundredth obviously are

12	34	97 98 99 100
XCLX	XCVII	III
ways	ways	ways,

the Subsolutions coming through all the odd numbers, the 50th, the 2nd, down to x . [The 101st has been already given,

12	13	1 51
23	24	2 52
&c., &c., &c. — Subsolution!]		

Disproof, Professor Peirce, is now in order! I half expect it. So much room for Error!

Why I "waste time" this way when I can't solve the Equations "?"

I am not trying to cut into the Absolute Impossible, only cleaning the edges, with my weapon. The Old Effort, the study of the unknown quantities, of no practical benefit if it were possible, from the Imaginary encumbrance that would possess *n* *x*'s, *possesses* Three, gives way to the Study of Unknown Equations, in which there are things that are Real! The Surface of the Sea has been gone over! What is under it, in the deepest depths, is the next question. Here I differ from Howells, who scratched my manuscript in the Atlantic, is not college-bred, nor English Authority — or I am wrong. In deepest depths — he writes or would write — Indefinite; in *the* deepest depths, the Definite Indefinite, Paradox, English. The sense of the people is right every time, although unable to give a reason. It is Corrective. Because it is of the highest multiplicity (many sidedness). Multiplicity, my hobby. I have Five Subjects; Him, Her, (I)T, and English.

I heard a great argument from the pulpit, unanswered then *by common law*, which I answered by letter never contradicted. — Exceptions to law prove God's intention. Water condenses, growing colder; Ice floats. What a blessing to man!

"How does it apply," I answered, "to planets whose oceans are carbonic acid liquid, which has the same law? Undoubted advantages would result to polar circumventors by changing from water (at once) to water-rock, traversable, at the frontier, the ocean ice being at the bottom." Everything would freeze solid, he had said.

"How soon in Siam?"

— Mrs. MacRoberts, worthy Scotchwoman, sent her hoard to David Livingstone to buy (?) (hire for life) a body-servant. The body-servant drew off the lion upon himself, which had marked Livingstone, so that his body was recognized in Edinburgh (and would have finished him). The 30 years that followed was Mrs. Mac's.

"Don't you see that your Livingstone and lion argument leaves out God (unless

I.

God couldn't stay the lion.

II.

God sent the lion.

1. To kill Livingstone.

2. To mark Livingstone with His approval of Mrs. Mac., in a way disagreeable to all four, the good LION, the bad lion, the faithful servant, and dear Mrs. Mac.);

and that, by such preaching, which is admirable, you are not teaching Religion, but falling back on common sense, of which all of us have, however unconsciously, a substratum?"

I bent over my first rattlesnake when I discovered him, and studied *his back*. I had been wrecked on the Wisconsin side of the Upper Mississippi, in a tempest, and was pushing up the shore.

[I had hired a tub, seeing it coming, half an hour before, at Frontenac landing, on Lake Pepin, (the little sandpoint which the excursion steamer, crowded, alas! with Germans, was trying to round, July 13th, when she went down,) and

pulled across, two miles and a half. When I wanted to return, I found I could not, the wind against me. What buffetings! I became seasick, and gave up the contest. The boat was heavy. I could not land her. A wave would come when I had got my shoulder under her to drag her up on the waist-high boulders that line the beach, and knock me one way, her the other.]

He was a capital S, a little bigger than my wrist, between two pebbles, on which I had stepped, and was still standing, one foot on each — Asleep! Ha! Ha! Old TRUTH! My kind friend and Admiration, General Israel Garrard, with his thirty saddle horses, on which he mounted everybody, his thousand sheep, twinkling down between the bluffs at evening, returned the money, by his boatman, which I had paid for Damages, with a Polite refusal. There is no finer site than his plateau, above the sandpoint, his Ambition there, to build a City!

Why did I pull out into the storm? The spirits drove me, Youth's Companions.

My twin delusions, born of Care,
Did oft pursue me everywhere;
And one was dark, and one was fair:

At noon, or in the fitful night,
They watched and walked my steps beside,
The one a glimpse of rosy-white,
The other drear to mortal sight,
And mocked my grief and humbled all my pride.

I sought the rills that wend their way
From lost retreats of blooming day ;

But ah ! by them I could not stay,

For weeks of toil or hours of prayer,
Alone or with my faithful guide :

My twin delusions born of Care

Beside my steps went everywhere ;

Nor vales nor woods from their pursuit could hide.

I tried the wave ; the rolling deep
Should rock those restless eyes to sleep
That still their endless watch did keep :

From side to side at every turn,

As late the lonely deck I paced

Or leaned upon the bounding stern,

I felt their gaze upon me burn,

And wooed the glimmering wake and beck'ning waste.

I lost myself amid the crowd
 Of foreign quays and cities proud,
 And said, rejoicing, half aloud,
 "At last I miss the hateful pair!"
 And as I took a lengthened stride

From street to park, from park to square,
 I looked around; — the dark, the fair,
 Through streets and squares and parks did walk and ride.

On Alpine heights, remote from men,
 I wandered, heedless where or when
 Eluding that unwelcome ken:
 The Night had pitched her starry tent;
 And, grasping each an eager hand,
 Till morning broke we upward went
 Above the cloudy firmament —
 And on my left and right the twain did stand.

From Arno's bank and Tiber's side
 By stern Vesuvius' crater wide
 At last, unspent, withouten guide,

As who confront me then would dare ?
 I thought to break the linkèd charm :

I looked behind : the twain were there,
 My twin delusions born of Care ;
 And one would haste, and one would hold from harm.

"Or foes," I cried, "or friends in jest,
 Or quit pursuit and grant me rest ?

You *have* me, traitors ! at my best :

Within this chasm you or I,

Despite your every power and charm,

Beneath the Rising moon SHALL LIE" —

The fairer answered, "On my thigh

I bear a blade can all the world disarm."

“Disarmst’?” I cried; “and dost not slay?
 What saith thy mate, that hides my day,
 With his my shadow clouds for aye?”

As though they took me at my word,
 My twin delusions born of Care,
 They gave me each a rumpled card,
 And either claimed my single sword,
 And jointly pressed and freshly plied me there.

The moon awoke the Waning night
 As down the path exhausted quite
 We still sustained the equal fight;

And when the shades their shapes did hide
 Their *names* pursued me through the air;

And as I knelt my couch beside
 To read the blotted words I tried:

And one was YOUTHFUL LOVE, and *one* — DESPAIR.

With bleeding heart and burning head
I trod the city of the dead ;

And lo ! above the ashen bed

Of manly pride, of beauty rare,

Upon the bright Pompeian wall,

Above the *shadow* of despair,

The Image of my warrior Fair !

Nor lost his smiling, conquering grace at all.

“ My life,” I cried, “ my all of earth,
To thine I owe, that saw’st my birth,

And shinnest here above the dearth,

The blight of hell and flame, the greed
Of fate forgetful of the brave !

For me didst vainly intercede ?

I own thee here a friend indeed :

Till now unpledged, go with me to the grave ! ”

And while I spoke, upon my sight,
Through roofless walls the welcome light
Burst like a sunrise on the night—

The comrade of my choice had fled :

My twin delusion, born of Care,

Had laid him down among the dead,

And left me quite alone, to tread

The highway through the soft December air.

When we all failed, in one of our Examinations, to find equal roots—we had formed the first differential coefficient and were trying to work the Greatest Common Divisor: what ailed that one I never knew: I left off in the thick of it and began again, Again, AGAIN, as fast as I could figure; the rest, no doubt, doing their best: at the end of the hour, when that bell rang, nobody had anything—what did He say? So gently! “You’ve seen Me at a loss!” How different the spirit from Tutor A’s, who rode out on a snow-plough through a great storm. I followed, on the first horse-car, not having seen the other (?) conveyance, and came late, and asked him, after a satisfactory recitation, “Shall I have to petition (the Faculty, *not to fine me* in merits, more than gold then)?” “Yes; you’ll have to *petition*!” The same tutor gave us *English* every Saturday, to translate, according to Cicero, into Latin prose. I did my best at it and lived through it. He must have marked me something for my Latin, or I should have heard of it. I never understood the *English* (?) of it!

What was the matter with Tutor A?

Tutor B*, with curly red hair, a little fellow, the most Consequential I Ever Saw, who died, I regret to say, of kink-in-the-elbow, marked me down because I laughed at him, sitting in the front row, when he made himself ridiculous, innocently copying, meanwhile, his “comments” into Livy(!) He should remember it, also, he added, publicly reproving me, in future marks; I never apologized, nor made any advances, and got 5, on a scale of 8(!). *There was a settlement in store for him*, if I missed my goal, at the fourth Commencement. Poor fellow! How I could have ruffled his rostership! I translated tabes, *slosh*—Hannibal crossing the Alps. Hear *him*! “Livy

* deceased.

would never have used a word so inelegant as has been suggested !” When Gurney*, dear fellow ! the short-clipped, full-bearded, who supplanted me afterwards, was reading Plautus with us, and my biggest classmate, the leading educator in Boston, ex-officio, was leading up to me (in the Play of the Father angry with his fast Son, telling a friend), and I had the word the boys were watching, verum (or something else) *amicae*, reading solemnly, he read the question, “Do you object to his paying attention to his *friend* ?” “Yes ; to his *female* friend !” And just below, still solemn, everybody roaring, (he reading on, they becoming quiet,) instead of replying *I* burst out laughing, the laugh I had kept bottled up till then, and he read again. The boys looked down, saw “*ha ! ha ! hae !*” put down for me — The shout that followed, I HEAR IT YET ! Gurney* himself, when I went up to him, to ask a question, after recitation, grinning again ! “It was like a play,” said our Class Marshal to me privately ; it *was* a Play, that four years’ course, with nothing like it outside the gate. Let others tell in their own way ; I have never taken my turn till now.

My dear Professor, Francis Bowen*, the Intuitive, had asked me how I distinguished moral certainty from demonstration. The said head educator was just behind me. How he thrust his finger into my back, and his “Then you did it !” into my ears, making me almost jump out of my seat, as I answered, without rising, while Bowen* leaned half over his desk, his eyes wide open, nodding with approval, “You might meet your own father in the street : and you couldn’t *demonstrate* that he *was* your father !”

Bowen* asked me, six months later, to become his assistant; and I accepted. I was "too young." The College wanted an Assistant Professor, and got Gurney*. To-day a classmate, who used to eat strawberries with me, without sugar, bringing me the boxes for the purpose, and beat me arguing when I knew I was right, and at chess also, hath Bowen's* place; is an Almus Pater (?), having married a college president.

PEIRCE lost in Differential Equations,
staring at the blackboard, His right hand
half raised, with the wool brush in it, to
dash out the error, never moving a muscle
for half an hour, till the clock struck and we
went out. How I admired Him! the finest
picture of Concentration (Power) I ever saw.

I have seen

Power, however, is not Performance. What we want is Particular Generalization, the finest telescope, image-maker, Imagination, the broadest light that does not blur the point.

He was Faith, Hope, and Charity!

SIXTY-FOUR

&c.

FOREVER!

Labor omnia, Amor omnes, vincit.

| DO - DO - RE - MI - |

Freedom's voice from far away,

From over sea and river,

Led our fathers here to stay,

Her honored guests forever :

North and South, and East and West,

Foster-son, and brother,

By her perfect lips confessed,

Listen to no other.

CHORUS.

Yankee Doodle, keep it up,

Yankee Doodle, Dandy ;

Fiddlers, when you stop to sup

You'll find the victuals handy !

England's kings and quality

Perceived the new creation ;

Where they waived a polity

They saved a growing nation :

Never need we cross the sea

For our fathers' mother,

Lost or left behind ; for we,

We have won another.

CHORUS.

Brandywine's a hotter sup,

And blood is thicker'n brandy ;

France can dance and keep it up

To Yankee Doodle, Dandy !

Ever through her forest hills,

And from her living fountains,

Freedom's horn-of-plenty fills

And linketh sea and mountains :

For her STATES' abiding Day,
 Loving son and brother,
 All UNITED, let us pray
 Till we win Another!

CHORUS.

Joy can tint a brighter cup
 Than other wine or brandy :
 Fiddlers, fill your beakers up !
 You'll find the victuals handy.

One-mooned third planet, four times its diameter, **SOLAR SYSTEM**, lost in space, January 27th, 1891. [Whoever cares, as many years from now as there are units in my long Corrective, may have to look for **IT** with a lantern. Where shall we be and what shall we know ?] Shall we ever view, by day, that splendid city ? If we keep on progressing, the rule of being, to the bound of ∞ , we must become gods, swing satellites, and rule the dead, — the ambition of great men and Robert Southey — the *living* habitat.

His days were passed among the dead ;
 Around him he beheld,
 Where'er he turned his casual head,
 The mighty minds of eld.

I need not mention the wordy poets.

“Floral apostles that in dewy splendor

Weep without woe and blush without a crime,”

Be this your tribute from an old offender

In prose and rhyme.

“Your voiceless lips, O flowers, are living preachers,

Each cup a pulpit, every leaf a book,”

With more applause than Henry W. Beechers,

Or Joseph Cook.

Poe will be there, with superior plans for a pandemonium; and his Despair will have changed to an Editor — there will be none there — in the form of a goblin.

She kissed me “Good-by!” in our little sitting-room, before Mother and Sister, so gaily, that I thought She was joking, and kissed Her gladly. She was a mimic, and as eloquent as Cicero. I never heard a better speech than Her *refusal*, the Monday after that memorable Saturday Afternoon ride, three years before, lasting ten minutes, ending, “and I hope I haven’t said anything unpleasant!” — She had been up stairs, on this occasion, to my bedroom,

and taken Her letters, on a pretext (to quiet Her mother); and I bade Her good night, without ceremony, on Her own doorstep, before the man.

The next morning my best friend and college classmate came to me with news of Her maiden promise to a stranger — *and then the rock fell on my soul!* I had to suffer, and work under it, along the ground, like a young oak. For four years, *every morning*, when I woke up, it seemed to me as if I could not bear the burden of the day. I *had* to bear it, to *live* and LET LIVE! — till now, at last, eighteen years later, I seem to have grown past it, to be pointed *upwards*, and once more to feel the blessed light! Whatever crookedness in me has been visible to my friends, I have explained.

I propose $\neq$, $\nless$, $\less$, to mean, is *not* equal, greater, less — God save the printer!

$$m \nless \frac{n}{2}; \quad m + 1 > \frac{n}{2}:$$

$A_{n-4} + B_{n-4}$ ($= \Sigma$ product of m x 's) subsolves $x^n = - \&c.$ (in which $x^{n^{n_5^{n_5}}}$ $= - \&c.$, is included, and we have no further use for it except as aforesaid); and this is at last the full secret of xx_2 , which has a regular variability which belongs to no other but x itself. I have always wanted a composite root — our new Variable, gentlemen and ladies! X ($= xx_2$)! x being prime. The Fifth and IT can now be rewritten, to advance backwards.

I am too impatient to write this out! It is Observation, Eyes! President Eliot! x and X entering rhythmically into all the coefficients.

Man, the Finite Infinite, Paradox; Woman, ephemeral, not comprehending eternity, and laying her plans accordingly — as the Arabs put it, hyperbolically, having no Future!

My estimable Professor, Josiah Parsons Cooke, was kind enough to say, to a third person, when I was in College, if I kept on, I would become, &c. I have kept on and Not kept on — Paradox! — quite underground, and out of sight and knowledge!

I read the name now, Mother gave me, γεωργός, earth-worker. To him who works *the earth*, the heavens are *added*, sunshine and rain!

WINSLOW, Dear Father, is the motto which has been revealed to me. WINSWIFT, my children (!), the one I *wanted* in my young manhood. I came late to the High School, late to College, tossed meanwhile by waves of fate! — late, at last, to IT.

Never mind my play on these equations! A *tool*! Paradox! (which nothing scratches); a *Science*! AlGeometry, Algebra-and-Geometry in motion!! a *Philosophy*! the InDeductive!!! Fate hath pursued me till the other day, I turned and *bridled* it; and now, for a day, I'll *ride* it!

P is a Paradox, Variety Fixed; *p*, also; every permanent, however simple or complex.

Who discovers a fact is worthy of all praise; a field and flowers, others may cultivate, of greater.

When I commenced this paper I said to myself, x (the root) = &c., is the expression of an IDEA in Algebraic language. If we cannot express it we ask ourselves whether the fault is in the IDEA or in the language. Dr. Hill

had the IDEA. He wrote to me, "It has often come over my mind with great force" (that the n th could be solved, subsolved), when I had barely sent him my b p 's. "I should think it might yield to your mode of attack." Prophecy that! and Intuition, like Peirce's $\sqrt[3]{1}$, which, under my Microscope, has shown itself to be the $\frac{\text{root}(s)}{\text{root}}$ of an equation "*of the seventh*," mind you! with not all $x \Sigma$ coefficients, on a P ladder below the 13th, the 11th?, the other 7th?, (the 1001st, more wonderful than the Arabian Nights' Entertainments). Instead of the simplest equation of the 7th, the most complicated (all significant coefficients?) of the Unknown $7 \times (200200)$ th. The b multiplicity equation, 933120 times as high, has all but the x^n ? (a multiple of 1's) coefficients zero.

The Science, ah! of AlGeometry, the world itself will not begin to contain.

The 15 table, printed like the 5 (page 6), requires 32,691,859,200 pages of the same size, making *a back*, which, sighted thither and buried here, about three deep, would stick out in China.

I *bought* a dagger, to have it handy, in my bedroom; when I looked for it, out of curiosity, it had disappeared.

I was a civilian, he a captain. I could not blame him; but I challenged him *twice*! Murder (My Hope!), Power, and Passion, are hard to bury, and will out!

In our new science, the figured Σ 's; and now we will have them danced. A quick quadrille! Here come the fiddles! Then all to supper, day after day, no two together twice. Come all the girls, in all the Schools of AlGeometry, from Shore to Shore, from the Arctic to the Cordillera, by threes, fives, and sevens, Truth, Beauty, Loveliness, every odd number, and All together — I'll beat the time — rub-a-dub-dub — Attention! 1, 2, 1, 2, Sing!

CHORUS.

2 | LA - SE - LA - SOL - | LA - SI - DO |
 4 | $\frac{3}{16}$ $\frac{1}{8}$ $\frac{1}{8}$ $\frac{1}{8}$ $\frac{1}{8}$ $\frac{1}{4}$ |

Now All recite!

The sons of him who strode the sea

To serve the *Ferdinand of yore*

Shall know no elder power than we

Along the Caribbean Shore!

(If any living name there be,

Or dying, hostile to the Free.)

Now I will repeat for the chief soloist, if there be a voice can make you all hear. The Goddess will sustain the echo.

THE WHITE WIFE.

Galop accompaniment, violins.

Ghosts all in white come up and dance.

A Song.

I sit in the window by day,

Till darkness covers me o'er,
With never a chick nor a child at play ;

For I'm wed to a blackamoor !

I'm wed to a blackamoor,

A most significant thing ;

And I'll touch not a *coal* to the lamp of my soul
Though he wait from summer till spring.

My darling is tied to the door,

Where all will reënter who can,
Which the great and the grand at the gate understand,

And they call him the janitor-man :

My darling is tied to the door

With a long, invisible cord,

Which the pride of the land must preamble before,

The prince and the priest of the Lord.

His brother and I call him Wash :

'Tis the first of a glorious name ;

But wash while he may he can never away

With the mark of my marital shame !

The mark of my marital shame,

My sister survivors in sin,

Who will nothing at all from winter till fall —

Pray when does your duty begin ?

Your purchase and promise of love ?

What mark can your motherhood stain

That ye will not give sight to a coming delight

Nor parley with Pleasure and Pain ?

Nor parley with Pleasure and Pain !

For the lives that hardly begin,

For the lives that we take and the loves we forsake,

My sister survivors in sin.

We all know a blackamoor

And a *widow* who's only a score ;

And he stirs up the mode with a shortening goad

As he stands by an entering door !

He stands by an entering door,

While Joy is without in the sun —

Is passion within, it is hardly a sin

For a widow of twenty-and-one.

To whom go the beauty and grace

In the swing of the darkening door,

And the gift of the pretty, intelligent face

She shows to the blackamoor ?

She shows to the blackamoor !

The bloom of her bountiful youth

With longer delay will not linger for aye,

Thou Boaz unworthy of Ruth !

And who is the blackamoor ?

A devil in answer and aim,
That the God-given plan that delivers a man

He turneth about to our shame ?

He turneth about to our shame ! —

I wonder how ever he can,

In Fashion's domain who ever doth reign
Since passion *and* Fashion began.

Our sisters, and cousins, and chums,

And citizen wives by the score,
And other begums to the tips of your thumbs,

Ye are wed to the blackamoor !

Are wed to the blackamoor

In spirit though never in name ;

And wash while ye may can ye wipe it away,
The mark of unmotherly shame ?

I sit in the window by day

Till the shadows surrender me o'er

To the dusk and the dark I have harbored — but hark !

I've never told *this* before :

The name is writ over the door !

And the shadows get wing as I whisper and sing

The Song of the Blackamoor,

The Song of the Blackamoor,

As I pose for a bride and a begum beside,

With ample provision in store,

Not a hawk, nor a hag, nor a h—;

And down in the dark is a figure whose eyes

Look right into mine with a glassy surprise,

A face I have known before

I was wed to the blackamoor ;

And the hair and the forehead are white and bare,

But the figure itself is curtained in air,

And the name is over the door !

His fathers and forefathers bore :

And my sisters' distractions and charity-chums

In skylight and eyelight are sucking their thumbs ;

I am joined with the other begums, begums,

Who never have known before,

The Name was writ over the door,

Violins stop. Double-basses. Time half as fast.

Darkness ! Lightning and thunder (Vox Dei) ! Ghosts all in black.

Of our National Doom, written over the *Tomb*

Where Washington triumphs no more !

My Excuse (for Writing) ; it is Science !

My Excuse₂ ; it is Patriotism !

My Excuse₃ ; it is Passion !

All are Living ; and the world would be naught without them.

There would be no people, no country, no knowledge, no Future, no History, no Past, no Present, no Life,
no excuse for being.

Peirce offered me employment, before He took it, on the Coast Survey, "by and by My place, at the Head of it." Tilting back in his chair, another day, He told me with a giggle, "Secretary (Seward, I believe) has written Me a letter, in which he says, The Country demands My service." I found no answer, so near Sirius, and He didn't burn me! When I spoke again, another year, He was discouraged. Jealousies, I fear, and contests! He was pure fire! We saw Him turn, — so seldom! — His class of Six, from the blackboard, and catch our best fellow, *asleep!* He began quiet, to reprove him, and in five minutes had worked Himself up into as fine a rage as I ever saw. A tiger was no comparison! The athlete before mentioned, sitting next me, had his head down upon his folded arms, choking and shaking with suppressed laughter. For Our Last Examination, Seniors, we had an orbit of an asteroid, to work together. The British Almanac is worked out in duplicate; and the American, computed later, uses that. The good fellow — thank him! — had bought a globe, to draw on; but couldn't find the telling triangle by the intersections of three arcs of great circles given by the Three Observations. As I came in, the five, bent over it, were at a loss. Try the other side, I said (what He told Leverrier). They completed the circles, and there it was, nestling comfortably, *a little darling*; and the elements it offered agreed with the British — Clio — or some other! "So called," a word my father, who was no geometer, but a faithful funeral undertaker, devout, indulgent to all who owed him, for forty years in Boston, was always using. He must have had the seed of all TRUTH in him. "So called" pricks every bubble of human philosophy, what we call *matter*, for instance! We know the Subjective, by Consciousness; the Subjective-Objective, by Observation (which I define, the S-O which is not SO; God of the pulpit, as the Unknown Quantity in an Equation of the 1200,000,000th degree, being a different thing to every person; and have no patience with preachers who put HIM always before TRUTH, are never corrected, and

ought to correct themselves by saying, not *God*, but *my Idea* of God!) Why is Walt Whitman excusable? He is a Serious Naturalist. A facetious, irreverent Naturalist, like Byron, *never!* Reverent Naturalist is better. His language is pure because his thoughts are; everything he toucheth, Holy! The clergyman is Reverent without being a Naturalist; the Agnostic is neither, does not do himself justice. Newton was both; and Peirce. To the Pure Objective, which does not exist for *us*, we are all Agnostics, without acknowledging. — Or I am wrong.

Tell me, then, not Godhead: I could not understand IT. What IS light? How did I happen to come into being, and not somebody else, instead? There were ∞ chances against me at the moment, to 1 in my favor. The trouble with Poe was, his despair was real; his Raven, a reflection. He was born damned! Coleridge, Ah! Thy terror was unreal; thy Mariner, a creation, and more weird because the unreality was not put forward. The test is Parody. Who has not parodied "The Raven"; and who ever, the "Albatross"? I would parody it, for illustration, if I could. Let me see! I must first find a kindred subject. He hath no kin, of the "glittering eye," no more than Adam, at his appearing. The Ebon is alliterative for Alliteration's sake, full of one and ninety-nine cent jingle; the Alba easier, *apparently*, really harder, in execution, word-iterative for the Idea, "a *painted* ship, upon a painted ocean!" (When *he* gives (himself) up to words, see how his words dance, "about, about, in reel and rout"!)

"The ice was here, the ice was there,

The ice was all around;"

"Alone, alone, all, all alone,

Alone on a wide, wide sea;"

They have the same moral (reversed) — kill (do not kill) the bird of bad (good) luck. Poetry wants Sincerity (Soul), first ("There is a bosom all my own," Byron, was insincere!); Meaning, Point, Expression (Mind), second; Stanza, Form, Verse (Body), third; Metaphor, Hyperbole (Substance), fourth; Grace and Propriety, Allusion and Suggestiveness (Education), fifth; Proportion (Judgment, ah! that comes with Fifty!), sixth; Inversion of words, The Order of Thought (Progression), seventh; Rhythm, Rhyme (Music), eighth. — If it has these attributes and a few more — what would Man be without them all? — it will outlive. Maud Muller is charming, but has no sense in it. Ignorance cannot wed with Dignity. The barefoot beauty, looking down, is rural; the tone of regret (how much better expressed by them who never left their base of Reason), suburban truth. There is no love in it; it is plated, *on iron*. The woman's thought, a *silver* spoon! The judge is no more interested than we are. Imaginary (half mourning), satisfied, then would have been Real regret.

TWO GOLDEN (spoons)!

Love's not time's fool, though rosy-lips-and-cheeks

Within his bending sickle's compass come:

Love ALTERS NOT with his brief hours-and-weeks,

But *bears it out* even to the edge of doom:

If this be error, and upon me proved,

I never writ, nor no man ever loved.

"Do you think of me, sometimes?" Her inquiry, one morning, as She kissed me "Good-by!" I answered truly,
 "I think of you *all* the time!"

Ye banks an' braes o' bonnie Doon,
 How *can* ye bloom sae fresh and fair?

The note in Brother's eye! Poor negro! It *was* poetry. He was developing, had not been to Our School.
 The subject was grand, historical, true; the expression, sinewy, lacking a word —

(the mountain's listening height,)

 "The desert knew, and all the stars of light,
 How he did wrestle WITH HIS GOD by night!"

This lends itself to parody (complementary truth), as the Sublime (being trimmed close), doth not. The weak word is His, which, if it adds anything, adds untruth; diminishes what follows, by appropriation. The Sublime is simple, *single*. The Beautiful is the multiple simple, *love* and *admiration*, after Sublimity, *awe*-inspiring —the rose, the rainbow, The Lord is my shepherd — Before Abraham was, I AM!

APPROPRIATION.

The desert knew, and all its herds affright,
 How he did wrestle with his dog by night.

Addison veiled the same (want of variety), where he failed in stanza.

Wordsworth, in his Portrait, has the same childish error, "apparition," in the third line, and "phantom" in the first, being undistinguishable. In my dictionary of four-syllabic words I find — we want a vowel beginning, to shorten lovely sufficiently, with a secondary accent on the first syllable — Extradition [*claimed by earth from Heaven on a charge of being human, and acquitted at sight*], for instance. When he writes,

A creature not too bright or good
For human nature's daily food,

he is a man, immortal. The very pulse of the machine, a (metrical) crime and worse (as the Frenchman said); "It was a *blunder*!" "Eye (brow?) serene" means nothing — "betwixt life and death," dear W., IS nothing.

And now I see, with "*I see Rêine!*"
The pulse of William's Mary Queen,
A being breathing thoughtful breath, (?)
A traveller greeting life and death —

It is sweet, commendatory, seems like experience, but robs a woman of her birthright, passion. The test is tears. There are woman's tears but no *man's* in it. It is in the third person. Admiration enough for a sister-in-law, and no *husband* at all. The *woman* would rather he would quarrel with her and make up, again and again, — or I am wrong.

“With something (?) of an angel light” — “*the indirect question in the indicative*” again — is neither human, nor complimentary to an angel.

— A ROSY ! creature, too, and WHITE !

That beats the angel out of sight.

There are three stanzas and only two *parts* to it, an error of Form ; the contrasts, also, are lost, an error₂ of ART. *Two* portraits ! an error₃ of title. The trouble with Wordsworth was, he was a *poet* : if he had not been, he might have taken more *pains*. *Liberty*, in the second stanza, the first four lines, adds nothing to *free*, the word it rhymes with ; *woman* and *virgin*, the emphatic words, might be taken for granted. The second line is punctuated wrong, wanting the comma after *yet* :

A spirit yet, a woman too !

There are too many articles for art, nineteen ! unless their number gives her age. She was a phantom, an ornament, a shape, an image, a machine, &c., &c., fourteen different things ; and, with “dusky hair,” “her eyes (was fair !” an uncommon conjunction ! *Too all indefinite !* A mistress means *another* man’s. *The* means MY OWN ! A (an), in fact, is a *relative* article, refers to something previously *defined* ! *The* rose came first. A, in this sense, is emphatic. Imagine a man in the wilds of Africa, for the first time, asking his guide, returning to him, after an absence of five minutes, or half a day, “Did you see an elephant ?” (The Elephant). “Do you want to see an elephant ?” (“MY ELEPHANT !”).

Compare Addison's exquisite lines, 16, "Soon as the evening shades prevail," for the Progression in them; a step-ladder from earth to Heaven!

Shakespeare's splendid name had something to do with his individuality; Abraham Lincoln, Zachary Taylor, Andrew Jackson, had the same capital to begin with, and a hundred others might be included. Poe had only to say to himself, try, to make Poetry, while persistent *Smith* made rhyme in vain.

Gravitation, Sir Isaac, extends beyond your calculations, to wor(l)ds. Law is always discovered, *slowly*, after fact (then unknown law, divorced from fact, transcendental, the Imaginary Calculus).

Gray knew it, and is multus *in* parvo, and *Immortal*.

I shook hands with the magazine author who fell under the Boston Advertiser's criticism, — was it my post-office particular friend Fullerton's, who couldn't understand? — explaining the secret of literary style in words like these, "The vowel asks to be perpetually repeated, the consonant ditto; and each cries out to be perpetually varied." (across the silence). When *he* wanted to push a line without Idea, he offered alliteration, the best foot foremost; when the Idea, variation, that alliteration might not divide attention.

The *moping* owl doth to the *moon* complain.

(To the night complain, just as true, born dead!) Alliteration and vowel sequence!

Some *Cromwell*, *guiltless* of his country's blood!

Consonant sequence, vowel variety, the finer alliteration, kindred guttural, Variety Unity, Paradox, escaping attention, as *he* intended, and having, therefore, greater effect. THE SUN is unconscious of his own secret, and his effects ("rough hew them how") are openly produced: THE MOON is [an] artist, disclosing nothing. (Repeat

"There is a destiny that shapes our ends,"

"The ploughman homeward plods his weary way,"

in everyday words — and see how the effects compare! Try even the Cromwell! — Here I differ from THE CENTURY English, which *ignores* the article, "LINCOLN AS SOLDIER." Some *Cromwell*, *conscious of* his country's anything, is born sick (with the c and ð and ù alliteration) unto death! "E'en in our ashes" ends the poem without concluding. Omit what follows except

Shall *I* be missed on the accustomed hill,

Along the heath, and near my favorite tree;

The morning come, nor yet beside the rill,

Nor up the lawn, nor at the woodland, be?

The next, with dirges due in sad array,

Slow through the church-way path by strangers borne?

Approach and read — if thou canst read — T. Gray,

Graved on the stone beneath yon aged thorn.

I wrote to George William Curtis to ask if Harper's *preferred* the singular verb, understood, for the plural nominative (they had it so often); also, why, if *and which* has been tabooed, he wrote *and who* without comma. "It is necessary," *he answered*, "to a proper euphony." Shall I try to recall his sentence and my correction? I may get a word wrong!

"One of the most striking contemporary personal tributes to him is that of John Graham, the English actor, who was in this country at the end of the last century, [and who] met Washington towards the close of his life, by chance and without knowing him, near Mount Vernon."

One of the most striking contemporary personal tributes to him at the end of the last century, is that of John Graham, the English actor, who met Washington without knowing him, near Mount Vernon.

It is quite unnecessary to add that it was *in this country*, or *towards the close of Washington's life*, and a question if *anything* happens by chance!

I would not "devote" myself to mathematics, feeling it was out of human sympathy, Peirce's Lesson. So I said to Peirce the Younger (when he continued, "We have other candidates; of course your claims are pre-eminent!"), "I must go to Europe!" "You might go," he answered, "and take the tutorship on your return!" Science was wooing, has since wooed me in leisure hours. (Behold, I stand at the door and knock!) "\$6000 a year to spend," however, was not HER offer. "Good-by, George!" with Her last kiss.

Have I found at last a subject within the sympathies of my kind?

Shall I hear now from Science, a *true lover*, "Welcome, Geo!" or be indignantly refused?

CREATION.

Methought upon a lofty mountain's peak,
Midway 'twixt earth and heaven, a spirit stood
And cast his opening eyes on this fair world,
A babe, but gifted with the power of speech,
Feeble, but quick of eye and ear and touch;
And by his side an elder spirit rose
And held him in the hollow of His hand;
And I, not shrinking from the wondrous sight,
Drew near, nor hindered, up the mountain's side,
And caught the conversation of the twain.
"Who art thou?" quoth the babe; "and what am I?
And whence arrived upon this ancient height?
Who built the mighty dome above our heads?
And where are its foundation pillars laid?
Who painted it a bright and stainless blue?
And wherewithal? I see no pigment spread
In all the wild profusion at my feet
To match its beauty. Whence this rolling moon?

And who exalts his face so flush with day ?
 Art thou my father, and this welcome scene
 Thy pleasure ground and palace ? Answer me."
 The voice was still, a soft but subtle sound
 That e'en the forest seemed to listen to,
 And all its roaming denizens looked back
 And harked to hear that fearless voice again.
 The elder spirit smiled, and 'mid the sound
 Of bursting buds and happy insect wings,
 And songbirds carolling from tree to tree,
 And answering rills about the mountain's foot,
 A voice broke forth, resistless, deep and strong :
 From all around at once it seemed to flow —
 But now the forest denizens were deaf
 And heard it not.

"I am thy God, and this exulting scene
 Is my creation and *thy* pleasure ground ;
 My pleasure, that thou mayest find herein
 Pleasure and benefit of every kind,
 And by thyself unfolding worship me."

My Almus Pater, now and formerly, is Love of TRUTH, to which Fair Harvard is forever wedded!

Bowen* wrote, years after, a book on rhythm, to whom I submitted my discovery, which the Magazine editors would have none of, wanting l(uere, not literary science). I have his l(etter). "You have proved!" he says, adding suggestions,

THE RHYTHM OF PROSE.

The music of poetry depends on metres which are fixed; but what shall we say of the deep harmonies, the undiscoverable sweetness of immortal prose? The Imagination here is regulated; the melodies are Free! Law, however, underlies all the beauties of sound. Melody presumes metre; but may not the metres of prose be more various and intricate and in consequence less easily discoverable? The *repetend* is what we want to find, like what we get when we change a vulgar fraction with a large denominator, $\frac{1}{18}$, for instance, to a decimal. .07 — That's not it — .0769 — not it, only the beginning of it. .076923|076923|076923, is what is repeated. What can make the measure difficult to discover? The number of syllables it contains, and the number of parts unequally accented, halves, thirds, quarters, into which it is divided. In scanning all accents (on particular syllables of each measure, as the first or last) are equal; and the metre is wooden, unintelligent, mechanical, like the beat of a dance. It is what poetry, *as* poetry, (confessedly has to triumph over).

∪ The	∪ Lord	∪ is	∪ my	— ² shepherd; I	∪ shall	—	— ² not	∪ want.	∪ —	∪ He
∪ maketh	∪ me	∪ to	∪ lie	∪ down	∪ green	—	—	∪ pastures;	∪ —	∪ he
∪ leadeth	∪ me	∪ beside	∪ the	∪ soul;	∪ still	—	—	∪ waters.	∪ He	∪ re-
∪ storeth	∪ my	∪ —	∪ —	∪ —	∪ leadeth	∪ me	∪ in	∪ the	∪ paths	∪ of
∪ righteous-	∪ —	∪ —	∪ —	∪ —	∪ name's	∪ sake.	∪ —	∪ —	∪ —	∪ —

Silence fills out the measure, a double dactyl or spondee (= 4 long syllables) with the accent on the first syllable of the first half, and a secondary accent on the first syllable of the last half. In this lies the sweetness, as distinguished from the charms of the sense, of which simplicity is the greatest, of our English Bible.

How this loses by being cast into regular verse appears in the popular Sunday-school melody : —

He leadeth me! O blessed thought! O words with heavenly comfort fraught!

Where'er I go, whate'er I be, tee tum tee tum tee tum tee tee.

No new idea after the first three words in song or chorus!

The psalm leads in sweetness even when we try to unite the sound with the sense.

|| No ill | I fear : || I walk | with thee ; || thy rod | and staff || they com- | fort me. ||

(3 long syllables), the ear finding greater pleasure (Unit Variety) in the longer foot,

thy | rod and thy || staff they | comfort me. ||

To see whether our theory is correct, let us cross it by changing the syllabication.

The Lord is my guide ; I shall not want.

Where is the melody ?

On a land rent with civil feuds, and drenched in fraternal blood. ?

The phrase, *it may be*, after drenched, which I have left out, weakens the sense, also "or" before drenched. A land rent with civil feuds would be sure to be drenched in fraternal blood. and is too long by position, before four consonants.

On a land rent	with civil feuds	and drenched, it may	be, in fraternal blood.	(6 long syllabic.)
On a land rent	with civil feuds	and drenched, it may	be, in fraternal blood.	(6 long syllabic.)

Visionary (like a
vision (!), to save the
rhythm.
(7 long syllables.)

LITTLE EVA. | Always dressed in white,
she seemed to move like a shadow through all
sorts of places, | without contracting
spot or stain; | and there was not a corner or
nook, | above or below, | where those
fairy footsteps | had not glided, —
and that visionary | golden head, —
with its deep blue eyes, | — fled along.

placēs (for instance) is lengthened by *cæsura*; *without contracted* would be too short.

My essay having been *destroyed* by some one, I have had to reproduce examples in a hurry, without elaboration. There were triplets, slurs, and syncopations, &c. (as in music), every complexity. The Theory is correct. If facts (we all know what the Frenchman said) do not corroborate it, "So much the worse for the *facts!*"

The Vision of Mirza ends with a sentence whose melody haunted me, till I read its secret.

DISSOLVING VIEW.

DISSOLVING VIEW.

— vision which I had been so long contemplating; — but instead of
the rolling tide, — the arched bridge, — and the happy islands,
I saw nothing but the long, — hollow valley — of Bagdad, —
with oxen, sheep, and camels, — grazing upon the sides of it.

—Sweet! SWEET!! SWEET!!! The Master wrote it! (10! long syllables.) Find a flaw in it you cannot!

turned again is long (where *again turned* would be short), owing to the pause which follows.

See the Series, ~ in music, ($2\frac{1}{2}$), 3, $2\frac{1}{2}$, 2, $2\frac{1}{2}$, the rolling tide, &c.; camels and ^xcontemplating, lengthened by

the rhetorical cæsura (quarter and half pause). $\frac{3}{4}$ *camēls, oxen, and sheep*; $\frac{3}{4}$ *camēls, sheep, and oxēn*, allow no half pause before grazing, *camēls* having a $\frac{3}{4}$ ult. [and penult., lengthened by climax, to be precise. Anticlimax doth not lengthen. Sheep outelimaxes oxen, *in number*, oxen being Singular Plural, Paradox, having to be looked at one by one (and being pictured, therefore, as few, in his bird's-eye-view, in number, to make this practicable), to distinguish whether they *are* oxen. Cattle (including cows, bulls, calves, yearlings, heifers, steers, &c.) would outelimax sheep. Try it!] I suspect the Latin common quantity (before a mute and a liquid) was no other. *Unrhythmic* prose, newspaper English (?) is still-born,

We have here, indeed, one of the secrets of Immortality; a *leaf*, whose texture we can study, from the tree of life.

There is a weak point in the septuplicity which subsolves the Eighth; a single one, of the 5040 permutations, not doing duty. Let others find it! When I try it, it becomes animate, and shakes its fist at me.

Let us all sing the Hundredth Psalm!

Yankee Doodle inverted,	DO - DO	- RE - MI
		- SI - LA

Serve God with gladness, all ye lands!

His mercy sing through endless days!

Our life and health are in his hands!

Enter his gates with thankful praise!

My pillow, often before, in early morning, had been wet with tears. And when I told Her, She answered softly, "George, if I had been there I would have kissed them all away!" The world wants Flattery! Chesterfield, and Peirce, and She, dealt in it. We, the rest, flatter ourselves! He flattered God. I couldn't flatter Him or Her, *one* thing I lacked. Truth, kindly spoken, was my utmost.

Father had a great sleeping brain. Mother is FIRE. Of their Combination, with abundant food and good at all times — Again I thank him! — continuing prayers, and dying Recognition, I have the benefit. This is why Real-Love-Disappointment (not Imaginary) is an Eternal Wrong! God in us Chooseth what it lacketh (for its offspring), Forgetteth — never! One thing pure, Mother's love; true, Father's preference: love, perfect but mortal; preference, ah! *imperfect*, but touched with an UNFADING sunrise.

If the two *p*'s, p(atience) and p(erseverance), had been sufficient, the devil would have triumphed long ago.

THE HUNTER'S DREAM.

In the shadow of the mountain, on a mossy bank reclining,
 All the secrets of the fountain and the forest heart divining,
 Sat the sons of stranger mothers, twins by choice and more than brothers,
 If no word or thought refining,
 Happy both, at naught repining.

One was dusky as the fallow of unfertile summers burning
 From May Morning to All Hallow, all its hues to umber turning;
 And the other, fair as Adam, country maid or city madam,
 Health and peace and pleasures earning,
 Forest lore and treasures learning.

Never sound of horn resounding, on the zephyrs oft repeating
 To the echoing hills surrounding, "All the race of deer retreating!"
 But from far the wolves' wild sorrow, "Hunt, to-night; and hunt, to-morrow!"

Rose and fell, the rangers greeting,
 Fearless they what dangers meeting.

As they sought their open larder came at length in tone caressing
 While they listened hard and harder, at the hungry stranger guessing,
 "Here are summed all human wishes, forest herds and speckled fishes!"

Spake a voice the youth addressing,
 Bringing him in truth a blessing.

With no eye now for his brother, but a bold and swift decision,

And no ear for any other, sprang he up to meet the vision —

“ Seas nor mountains could divide you from my side ; how much belied you

Have my fears, in soft derision

Pleading still our oft division ! ”

And the flow’rets gained a sparkle, from her sight their glory thieving,

As his own began to darkle, half his dream of bliss believing :

In the midst a blushing beauty, mindful of one only duty,

Stood, his fortune lone reprieving,

In her hands his own receiving.

With a smile of heavenly kindness, with a kiss of consolation

Ending all his doubt and blindness and in bliss his long probation :

Earth or air could hold no treasure like this least expected pleasure,

Praise of men in bland oration,

Power, nor pelf, nor grand ovation.

"Here's refreshment fine and sapid for my safe delight and charmer!
How hast passed the raging rapid?" "With a rude but trusty farmer."

"Hast no dread of overshoeing, unaccustomed to canoeing?"

How should wolf or bear alarm her?

Maidenhood doth wear an armor.

"Wâbâshub shall lay the pillow for my pearl, my pride, my treasure,
'Neath the rill-bespreading willow, while I wait thy waking pleasure,
Till the prince of day appeareth; for the moon the morning neareth,

Smiling now in scrimping measure

At her late and limping leisure."

She sings.

Starry cross and coronet,
 Pinned in folds of purest jet,
 Naught illuming, ever bright,
 On the seamless robe of Night,
 Far or near your vigil keep !
 Now I lay me down to sleep.

For my love my virgin hand
 Leagues hath reached by seas and land,
 Love that seemed so near and far,
 Like an ever guiding star :
 Love shall guard my slumbers deep !
 Now I lay me down to sleep.

Love my pillow here doth spread,
 Far from downy, tufted bed,
 Whom at morn my sight shall cheer,
 Then and evermore be near.
 Rest, my heart ; nor willow weep !
 Now I lay me down to sleep.

O'er the tent the sunlight streaming as they slumbered by the fountain,
 On the lids no longer dreaming came with dawn upon the mountain;
 And he called the name that nearest to his heart was long and dearest,

Name of first confessed account in

All the dreams of West Lamountain.

Answered him his comrade dusky, ever daring death and danger,

In a voice untuned and husky, gladly hailed by forest ranger,

“Nothing saw, nor felt, nor heard I, voice of man, nor beast, nor bird, I

See no track of guide or granger;

Lone canoeman, bride, nor stranger.”

She turned me away once, at the church door, a Sunday morning. Mrs. Dr. Tt would observe us! “You must ask the sexton to give you a seat.” Pride gave Love a trip; and I was turning, as She passed in, to go away. With eyes open, in a vision, Life stretched out before me,—a black desert. I have had to cross it. *God knows* there is no water in it; and beyond are mountains—I did not see them—steep and cold. I went in humbly, and sat alone; and that night how She hung in the dark streets upon my arm, and pressed Her lips to the seam of my coat-sleeve, at the shoulder, not being able to reach mine!

Similia curantur — Paradox again! The element that solves mystery, cuts diamond, nothing else and nothing less!

She *had* an unwholesome glitter in Her eyes at times, when we were alone. *I* didn't care, only an error of Abundance; had She been a man he would have made a prime seducer, so bewildering, and fascinating! + P(assion) and — p(rinciple)! I was precisely in both respects Her contradiction, cold to *other women*. Diamond will not soil a dainty finger, wants Heat and Kindling, but is coal; and in Our union and Our offspring, Paradox, Passionate Truth that might have set the world on fire. I had Burns' Tense, his inner clearness, his Was and Shall Be, and ached for song; She had his Mood: their union, the MIGHT BE and MIGHT HAVE BEEN! Fate is the shadow that pursues us, seeking *Substance* (Incarnation). Religion, our great Teacher, hath it. This is General (Particularization), Our Church, Age, Country, World, and *every other*. "Pagan!" and the cocked revolver I was ready, and should have had, to handle (teaching honesty) in Shanghai, is the Argumentum Unworthy of Our civilization. All men love and worship TRUTH; and all Religion, Paradox, (is) Untrue (Subjective) Truth, that leadeth to it. Alwelcome (Love, the Pleasant) Pain is but the suffering of being born, if born at all, again. Mothers have it, at (the time) and after, (they have) offspring; fathers, long before.

I was not idle. I had two thousand per annum, soon raised to three, and She, a prospect of inheritance, when I bade Her good night (suspecting nothing) for the last time.

"It was a noble love," She wrote herself a year before, when we had parted, for a few days; "and if Mine had been equal to yours we might be happy yet!"

"*How I used to torment him!*" to a third party, ten years after.

It makes no odds if She *wasn't* worthy of me: She was the woman my nature called for! There is nothing

original in us but appreciation of the mind that has come down to us through countless generations; nor out of us, except the happy combination. Permutation-and-combination, my Fatalism! Can a man enter a second time, and be *unborn*? Yes, Peirce and I, who met Again, in 1862, in Cambridge! AGAIN, a third time, He will receive me "as a little child." Have I not explained Him till a child can read His secret in the 15 Problem, build new *p*'s, and ask me *q*'s I cannot answer? They *can* be answered, simply; *every* fair question. He felt intuitively the solution, but misnamed it, as did their Discoverer, the West Indies.

I could not have approached Him on an orbit. He would have gone round it too rapidly; on a point I had Him! and thank Him kindly for bequeathing me the "*opportunity*," claiming no merit beyond what (Wins — do I hear it?) His approbation.

Pers(istence) I never did lack. In the Hereafter we shall be reconciled; and I, rewarded with Her Acknowledgment of my Truth. Our lives are a web; and the threads cross. There is something in this life men do not see. They see the earth's crust, its metals, minerals, for instance.

I was writing an account — God forbid that this should vary from the TRUTH! — of a hunting trip. It came over me to add a scene, very improbable (I said, but wrote), a grand adventure. The account was in London, waiting publishers' acceptance; and two or three years after, I was hunting. The scene, in new country, rose before me at sundown; and I exclaimed, "There's my bank of sand!" *high as a house*, on *head waters*, as I had written, *so improbable!* only instead of *red*, a streaky yellow. What doth it prove? Human foreknowledge and Predestination!

In the morning, as in the story, we were there again, at the bend of the creek; again I exclaimed to myself, "There's my bank of sand!" when Joe began to paddle as still as death. I made ready, knowing what was coming. The bull was waiting for us, round the left turn, as in the story; and I killed him. There the confirmation stopped. He *didn't* chase me into the water and up that bank! I would not have cared a rattle if he did! Did I not survive him in the story?

I was slightly interested in a young lady, and was just returning from a visit to her, when my Fate, whom I had not met for a long time, passed on the sidewalk. I almost ran into Her in crossing Washington Street. A year passed by. I was on my way to call again on the same young lady, had seen her in the meantime two or three times. I got into a horsecar which stopped still on the next crossing. My Fate again — I had not met Her meanwhile — took the crossing, walking straight towards me, but did not see me, in the end seat, nor enter. Teach *me* paths do not cross! I know the Calculus of Probabilities well enough to explain coincidence. It was not coincidence, my being born! It was a web, and neither the Beginning nor the End! *Disproof, Professors!*

While I was working at the 15 puzzle, and had not solved it, and had prayed God to help me, on my knees again and again, for the first time for many years, and was still writing, half undressed, I looked by chance — and in the glass, what I had never seen before, was a plain cross on my breast, a span and a half in height, as heavy as if laid on with a painter's brush. — I am not superstitious; neither do I mean to be blind or deaf. Twice in the night, within five weeks, the last time now about three weeks ago, I have been woke towards daylight, *sleeping alone*, by a voice calling "George!" I answered the first time, knowing no Fear. My God, my Father, my Younger Brother, my Professor, Thou knowest I am Ready for Death and Life.

Eliot, I think, not to the contrary, Mathematics teaches us to look on both sides of everything for the complementary solution, every Rule working both ways. I, with its instinct, cannot help turning everything inside out and upside down; if it stands then, 'tis TRUTH; if not, 'tis the step to it, Contradiction, Paradox! Nothing like Error for consistency! I don't care what you put it into! Authority is the other name for it. A young mathematician of immense promise* proved some time ago by pure Deduction — I haven't seen it — that the Fifth couldn't be solved by Algebra. If he had named the InDeductive, my foredoom was written.

SWEET HOPE, GOOD NIGHT!

Though far from home,
And silent rules the Night o'er earth and sea,
In distant, gloomy regions while I roam,
I think of thee.

Thou wert mine own
In days which fleeting Time nor Grief hath passed,
When Joy sat with us on his idle throne,
Too pure to last.

The nightingale

Doth charm the listening shades upon the tree
 To cheer his trusty partner in the vale —
 And *I* am free.

The stars on high
 Can destinies of men and nations cast :
 How little caring for their presage I
 Who *know* the past !

And forms of dread
 And wakeful hate infest the thorny wild,
 But creep not, thirsting, to my lonely bed
 And undefiled.

They fear the hand
 That cannot from its fate the heart defend
 Nor equal faith and courage can command
 To face the end.

If God and Christ

In secret shades my sleeping form can see,
Their fairest messengers of aid unpriced
Will fly to me.

In dreams, perchance,
To waiting lips no answering ones attend,
The warmth of former years may yet advance,
My more than friend !

And, if awhile
It be my fortune here to dream of bliss,
The sudden rapture of thy greeting smile,
Thy parting kiss !

Perhaps the star
That clambers o'er my still, unsheltered brow
In less exalted fields may shine afar
Upon thee now,

And o'er the earth
As flows betimes the welcome tide of rest,
Some throbs of kindred grief bewail their birth
Upon thy breast.

O, Lyra fair,
That topp'st the pyramid of lamps above,
Can'st read from off thy seat so high in air
The glance of love?

The Cross, the Crown,
Though all that view be neither called to bear,
Must hover likewise o'er the tinsel town,
So high in air!

And flags unfurled,
Towards which for ages man doth blindly grope,
Are flung resplendent o'er a dreaming world
That held my hope.

Sweet hope, good night !

And thou that know'st or carest where I lie,
Till Heaven illumine our divided sight,

Good-night ; Good-by !

Illusion fair

That clad my earnest youth in armor bright,
I yield thee up, at last, to empty air,

Sweet Hope, good-night !

Popularity says, P. V., I will ; Divinity, D. V. ; G^{OD} IN US, V, I Will.

Listen ! Conquerors have two secrets : They never give out. P(atience) and p(erseverance).

They never give in, never knowing when they are *beaten*.

U speaks last, but is indispensable in and to us. How lonely must God have been when Calvin, working backwards, created HIM, an Age before anything else.

An Age ? *An Eternity* ! for Philosophy makes no provision for the Past.

The Equation of a round point is $x^2 + y^2 = 0$; of a square point I sent to Dr. Hill, and challenged Harvard, through her President, to write it. It is the vanish of a square cone ; the vanish of a square pyramid (with sharp

edges) may never be written. ∞ doth not contain it. There is no other field but the Imaginary, the Transcendental. I haven't tried that. $x^{\sqrt{-1}} + y^{\sqrt{-1}} = 0$ must mean something and nothing (Paradox), finite imaginary, (an imaginary point?). Will Dr. Hill try it?

The secret of Literary Style? Yes! 1st. TRUTH (other perfections, Beauty, Harmony, all forms of THAT); then Realism, the Secondary Bow; then Art, the *iris* (sometimes seen) around the sun.

Her love making was Realistic. I had written Her at seventeen (She was fifteen), without suspicion, in my first poem, of the two rainbows,

With stripes reversed and faded hue,
The ghostly symbol mocks the True!

I saw Her in church, thirty years later, the pew behind. She had three chins now! When I looked round, She leaned halfway, close to me, reading my face to the back brain, my eyes wide open, half with wonder. I could never read Hers. A smile always veiled the soul behind it; now something else. It was a tender sermon, Love *your enemies* — James, FREEMAN, CHRIST, did not include *Her*. I had forgiven when I turned to go out, and would have walked with Her, but She looked not up, nor stirred a muscle, changed to stone. Next Sabbath, some seats in front, She stood up short, tight-laced. When She sat down She towered above a full-grown man beside Her — coquetting with him all through the service, he not returning the least attention — and Her plume overtopped everything in the church. "They that stand up short and sit down tall are long-lived!" and a long life was what I always felt was in me. Father died, worn out, with a stout body, at 76½. Mother, feeble,

always an invalid and half a cripple, from a slip on the church steps, uncleaned of ice, going out from service, *at fifteen*, is bright, at 75. An active brain preserves a body. Mind never *dies*. Memory, summoned, keeps us awake; unsummoned, plays us antics in our dreams, which Imagination, uncreative, is ever turning. The Creative in us (a kaleidoscopic power) gives us offspring; in the kingdom where there is neither marrying nor giving in marriage, what will be substituted? We shall lose nothing. *Direct* Creation! Combination Creation, Paradox, is Man's limitation; Absolute Creation remains unproved, unprovable, unTRUE, of God himself! Doth HE create TRUTH? No! — Algebra? No! — Can he Destroy them? No! — Gold? No! No! — Doth HE Observe them? Yes, Yes, YES! — Is TRUTH personal? No! — Conscious? No! — Is this Philosophy? Yes; The InDeduc-tive! — What is TRUTH? We are learning. — What IS TRUTH? * * * * * AGNOSTICS. — *Disproof, Divines!*

THE FABLE BEFORE THE BIBLE.

He and She were at opposite poles of the allemptiness. They gravitated — God didn't — and, passing close, caught by the hand, commencing to revolve with great rapidity, making short days — or Methusaleh could not have lived so many — then, as they stretched apart, more slowly, behind HIS back. Behind HIS *back* they found Death.

It is a nice little problem for Lunar astronomers, who live, of course, on the other, the low side, to calculate *us*, their Inaccessible (worse than our North Pole) covering half the satellite! How funny their Religion! making *it* the sum and centre of all things, *themselves* The Object of Supreme Attention!

ALGEBOMETRY.

NINE SCHOOL GIRLS.

First Sunday.

1891.

One Lunar Month.

No two in column, no
three in mass, together
twice; thirteen times a
year.

See how 2's choose
from the 1 columns; how
3, 4, 5, &c., the rest of
each 1 column, reads
down the page, and up
through the columns;
how the columns read
on to the squares, &c.,
&c.!

1	2	3	1	2	4	1	2	5	1	2	6	1	2	7	1	2	8	1	2	9
4	5		6	8		3	4		4	8		3	6		4	6		3	8	
6	7		3	5		9	6		9	5		4	9		5	7		5	6	
8	9		7	9		7	8		3	7		5	8		9	3		4	7	
2	4	6	2	6	3	2	3	9	2	4	9	2	3	4	2	4	5	2	3	5
8	5		7	8		7	4		3	8		5	6		9	6		4	8	
7	9		5	9		6	8		5	7		9	8		7	3		6	7	
3	7	5	4	5	8	5	6	4	6	5	8	7	9	6	8	7	6	9	6	8
4	9		6	9		3	8		4	7		3	8		4	3		3	7	
8	6		7	3		7	9		3	9		5	4		9	5		4	5	
4	7	8	6	5	7	3	6	7	4	5	3	3	9	5	4	7	9	3	6	4
5	6	9	8	3	9	4	9	8	8	9	7	6	4	8	6	5	3	8	5	7

Read Squares Four

Ways.

*Eyes! Eliot. Try it!!*

Jan. 4th	8th	12th	16th	20th	24th	28th
1 2 3	1 2 4	1 2 5	1 2 6	1 2 7	1 2 8	1 2 9
8 4 7	7 6 5	7 3 6	3 4 5	5 3 9	9 4 7	4 3 6
9 6 5	9 3 8	8 9 4	7 9 8	8 4 6	3 5 6	7 5 8

How many different ways can these squares be writ? Try it!

1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3
4 7 8	5 9 6	6 5 9	7 8 4	8 4 7	9 6 5
5 9 6	4 7 8	7 8 4	6 5 9	9 6 5	8 4 7

2 3 1 (6 ways)

126; for a guess.

3 1 2 (6 ways)

PROPOSITION I.

Every Σ of $n'n_2'n_3$ &c. x 's can be arranged in groups of $n', n_2', n_3', n'n_2', n'n_3', n_2'n_3',$ &c., x 's, and groups of groups (no two, no three, &c., together twice), in evident cases, an evident number of times, by

AXIOM 1.

The results of impartial Algebraic operations are impartially distributed.

EXAMPLE.

When $n = 3 \times 5 \times 7$ (for instance).

$1 + 104$	$3 + 104$	$5 + 100$	$5 + 100$	$7 + 98$	$21 + 84$
$1 + 2$	$3 + 2$	$5 + 2$	$5 + 10$	$7 + 14$	$21 + 14$
$2 + 104$	$4 + 104$	$6 + 100$	$6 + 99$	$9 + 96$	$25 + 80$
$2 + 1$	$4 + 1$	$6 + 1$	$6 + 9$	$9 + 12$	$25 + 10$
52×104	52×104	50×100	$9 + 96$	$14 + 91$	$28 + 77$
			$9 + 6$	$14 + 7$	$28 + 7$
<i>"operations,"</i> WELCOMES.					
	5,408	$10 + 95$	$15 + 90$	$30 + 75$	
	5,408	$10 + 5$	$15 + 6$	$30 + 5$	
	5,000	$12 + 93$	$17 + 88$	$33 + 72$	
	4,339,375,040	$12 + 3$	$17 + 4$	$33 + 2$	
	25,464,238,800	$13 + 92$	$18 + 87$	$34 + 71$	
	20,243,520	$13 + 2$	$18 + 3$	$34 + 1$	
	29,823,873,176 P's.	$14 + 91$	$19 + 86$	$6 \times 8 \times 11 \times 15 \times 36 \times 71.$	
		$14 + 1$	$19 + 2$		
		$10 \times 11 \times 16 \times 19 \times 31 \times 46 \times 91.$	$20 + 85$		
			$20 + 1$		

$7 \times 8 \times 13 \times 15 \times 22 \times 29 \times 43 \times 85.$

In AlGeometry it may be made general.

PROPOSITION II.

1 leads the dance, beside the rest in double, treble (multiple) column; and each number executes a different symmetrical geometrical figure going down the sets, which I will call the UNION Reel, — to subtle melody. Do you ever listen? — that can be planned upon the column with connecting lines, — and this is what I mean by “*Eyes!*” — until as many figures as are called for have been illustrated by these ghosts of thought, 1, 2, 3, 4, &c. forever, waiting embodiment in ours.

PROOF.

Axiom 1, p. 113.

Whose thought “?” “You *have me*, traitors! at my best.” What is it beats and throbs in us and moves our intellects and passions irresistibly and pleasurable, whither it will? *We* move our bodies. What is it when resisted that cries out in us against EXTINCTION? Men call it love. It *is* not. The love of Truth, the love of Woman, have no relationship, except in name. It is the indivisible Life, reduced to a point and single, the I AM *in* us! TRUTH holds the Past; and Human Want, Hope-led, the Future, with unyielding hands.

Accepted love is a Paradox (Liberty Bondage), as described by Lovelace. The pleasure, also, of letting love take liberties, have her own way, is paradoxical; Poetic license. Could anybody else come round here and do anything You please, sit in my lap, pick up my papers, question, and make me write Your letters — as You did

once, and *do now* in Imagination ? while time stands still and hearkens Your departure, at my door ; and despair draws back, into the midnight, to hide his *shadow*, from the shutter.

I had to undo a button, oppressed for breath, and thought of Lear, when She asked for Her letters, sitting beside me. We were alone in our little room. She seemed hardly in earnest. All unsuspecting I answered solemnly, "If the choice is between your love and the letters, I'll give you the letters," letting her get them. I could not put them back into her hand what it had penned with triple postscripts, and pet names signed in sweet succession ! "With my warmest love," unsigned, was on a slip of paper by itself, which she had written in her mother's presence, I watching always her every motion, and passed unseen into my hand, and I had pressed it to my lips and hid, beside my heart, till I could read and answer with a letter, which failed to please her — *too fond and earnest !*

P(aradox) (Contradiction Truth) IS Metaphor, Hyperbole, P(oetry).

Contrast, Simile (Diversity Likeness), and Comparison (*lower p's*), ARE p(rose). The song of birds, the voices of the rills, contain them — Do you ever listen ? — Two notes or beats ! The monotonous rapid, as you push alone beside it through the thicket, has a *beat* in it, the trembling ground, fearfully like the tread of an immense animal. How often have I clutched my gun in silence, and *looked round !* Unvarying sound conveys no meaning except what has been imposed upon it — the locomotive whistle, for example. I have heard a loon and a big owl strike the major dominant, F below, and middle C, above the bass, a twelfth, and *hold* it, till the hills rung and rattled.

P is the Poetry of Algebra.

"My gates," "my grates," is a half rhyme (too little consonant variety); and the Poet uses some dead words (never our dear Gray, out of Ideas, using one dead and buried in the Elegy).

"*That soar above*" adds nothing to "*angels*"!

TO ALTHEA, FROM PRISON.

1650-1891.

When Love with unconfined wings
 A courtier's hour awaits
 And my divine Althea brings
 To whisper at my grates,
 When I lie tangled in her hair
 And fettered with her eye,
 The birds that wanton in the air
 Know no such liberty!

When flowing cups run swiftly round
 With no allaying Thames,
 Our careless heads with roses crowned,
 Our hearts with loyal flames,
 When thirsty sleep in wine we steep,
 And all are still but me,
 Fishes that tinkle in the deep
 Know no such liberty !

When, linnet-like, inclined I
 With shriller note shall sing
 The mercy, sweetness, majesty,
 And conscience, of my king,
 When I shall voice aloud how good
 He is, how great should be,
 Th' enlarged winds that curl the flood
 Know no such liberty !

Stone walls do not a prison make,

Nor iron bars, a cage ;

Minds innocent and quiet take

That for an hermitage :

If leave to love be scored above,

And thought and word go free,

Angels alone, that choir the Throne,

Compare their place with me !

Ridicule contains Love (Contempt, Hatred) and Fear conspicuous by its absence ; Awe, Love (Horror, Hatred) and Fear predominating ; Reverence, Love and Fear in equal proportions.

I made a scale once, but have lost it, and only recollect two or three steps. Love and Fear are opposite Original Passions (Love and Hate (Jealousy) are complementary, prismatic, always mingled in varying proportions, intensifying each other) ; Terror knowing no Love (Mothers cast their infants from them during the plague), Perfect Love knowing no Fear.

HER PORTRAIT.

The face that finest ivory shows
A finer grain, the Persian rose,
The doubly pointed Grecian nose, —
My maiden love! the forehead fair,
The deeply brown, abounding hair,
The solid teeth, so surely laid,
A thought too many, — were my maid;
The lips which honey coined and dew,
The velvet hand, the dainty shoe;
Teeth that, like love, were made to wear, —
Behold my Beauty, passing *fair*!

The eyes which blue and gray contend
A double light *for life* to lend,
The brow that wrinkles with maiden care! —
What thought *unthinks* my Mary Fair?

The pleading breast, the goddess ear,
 So long and narrow, white and *near* !
 An ear with low depending lobe
 Could art *out-jewel* ? can the globe ?
 The winning voice, the dazzling smile,
 That bids the dawn recur awhile ;
 The string too tight, the tempting waist,
 The tender arm, the lips who taste,
 Nor taste but once, but *once again* !
 Still happy and *unhappy* when
 The trailing night is quite too late, —
 Behold my Flower and Fancy-Fate !

I held a hand beneath my hat
 And rode an hour, nor thought of *that* ;
 In crowded seat, the more the crowd,
 The happier Sweet, the happier Proud !
 And braved the tower of Bunker's Hill, —
 Would I were Beauty-burdened still !

The charms of Youth, still half untold,
Of Love and Truth, can ne'er grow *old*;
May all decline, TO BLOOM ANEW,
Without regret, if *Love* be true, —
A Dream ? — alas ! the mounting gray
Hath caught those kingly cares away !

INITIUM FINIS.

MEMORANDUM.

God, the Personal; Nature, the sun, the impersonal. It is the Personal that IS; the impersonal that LIVES a wider immortality in the minds and hearts of men. When a work, an author, becomes impersonal, as science always, it is on the verge of being great. The Elegy (Thanatopsis) ends with a personality (not the Old Testament, not a play or sonnet of Our Immortal), a point only, the Particular, in which others are interested only as they apply it to themselves, or imagine themselves in the same predicament, meditating action. Great work ends with (a view of — or a part of it, the Vision of Mirza,) a *return to THE EARTH*. I can't add to that! Do you *understand* it? Read the Old Testament! the beginning and the end of the last FIVE of our hundred and fifty Psalms! Not the letter, the I that killeth, but the Spirit, which must not contain (i)t, the word of Shakespeare or of Christ. When the first says I, he meaneth me, in the third person, to all time, the (I)mpersonal. The "I" of Christ is, *for your sake!* the second person, present. "I (you) go unto my (your) Father," the (I)ncclusive. The "he" of "The Epitaph" is *Gray*; the "thou" of (Th) is *Bryant*. Compare "To be or not to be," also a soliloquy, for the impersonality in it!

Napoleon, the I of modern time, lives now in the greater impersonality, IDEA, of government, of truth, which, in two or three enduring coins he stamped with his acknowledgment of the past, that they were genuine. Gold means the Past, Love means the Future, Truth means the Present, types and symbols. His soul (Ambition) is dead, and of no value except as a warning. TRUTH LIVES, the great Impersonality; Human Affection, Passion,

phases of it. Everything else — and Falschood — but ITS shadow, which, without it, could have no existence. Evil I define, and account for its entrance into experience, in the same way. They are unconstructive, uncreative. Criticism is constructive, has love in it, if of any value, is a saviour. Human responsibility is very narrow ; most of our failings, as our features, we cannot help. Faith being lost, Hope killed, ABIDETH Charity.

The Indian epitaph comes into my mind, which I translated, with Wabashub's assistance, from half-illegible Aragonkien (?) about the daughter of a sachem, printed once before, never what follows, (in a little magazine, The Fireside Companion, 11, Bromfield Street, with a moose hunt, a hundred blunders, and the Vision in it).

"She once was beautiful ; but her heart was harder than ever headstone."

One before me was betrayed with a kiss !

Two corrections (a grammatical error and a blunder) in what ought to be the last line of Thanatopsis *those* who shall follow *them*.

— "the sons of men

Shall one by one be gathered to thy side "

By them who, in their turn, shall follow *thee*.

The living *do* follow to the grave ! How plain has a point got to be ? FOLLOW THEE means *into* ! As

Lincoln said, "I see the American Eagle!" "Where? where?" inquired a bystander. We all know his answer, "It's a pieten, you fool you!"

The rest is sweet words with no sense or logical connection. "*Summons comes*," three ü sounds and the m's, is the key to it, lost halfway down! We die daily, not all at once! should live prepared, *and die*, to die and LIVE! How do you know you're going to die? Did anybody ever come back and tell you he was dead? Did you ever go there and find he hadn't been? Should you haunt the living, having no power, if you were he, when you might go to the population where you had? Should you stay here alone, by choice? That which was *in* you never died; for you can trace your mental and bodily inheritance across the grave, on every side, of your immediate progenitors! skipping generations (tombstones), or if not, and the current flows through all, like buried rivers that burst out again, which part the living traverseth is the place of death? which part? I press it. I press it! the question, can but half express the answer to it. A. B. "takes after" his grandfather, living, whom he survives; father and mother dead and buried. Are x , x_2 , and x_3 prime? I wot *not*! They are X , X_2 , $X_3 = x_2x_3$, x_2x_3 , combinations of xx_2x_3 which *is living* all the time (was when A. B. was born (!)), a *family peculiarity*, doesn't die in parts, nor all together! Grant that? Doesn't die at all! directly follows. You don't see *it*? You didn't see *it* when *it* was here! You found *it* out by sharp experience. Or else you did see *it*; *it* shone! What shone? the flesh? the hue in the cheek? the *glitter* of the eyes? The soul, the character, is what we mean. Has that gone down, "to be a brother to the sluggish clod"? Then we must write anew the tombstone. Here Lies Truth, that never did and never can; is Fallen Virtue, to which Heaven is ever stooping; is

Impawned Honor — behold the box and shelf that hold it against redemption ! — is Buried Patriotism. We have said and done it — and the lips we kissed — sealed up, forever — of Love, Passionate Truth, of Christ, we have betrayed to the Arch Enemy. What is the world to do without him ? Where can we go out and hang ourselves ? If this is true, and human worth is in the grave, give me the key, its Heavenly blossoms ; others the garden ! Individual life is a *point*, of little consequence, even to ourselves, none to the bystanders.

“ For who to dumb forgetfulness a prey ” — read that in Gray, the Impersonal, the last throb of the human heart, a Truth, and compare it with the smallness of his second ending, a Fiction, which might have been written in three words, Here I lie ! How much better Pope, “ Steal from the world, and *not* a stone ” ! This is the i that findeth *sympathy*, the ever (everybody) dying ! It is melancholy (madness) all the same, but real, not Power, nor Passion, nor even Disappointment, Nine years old ! and thy ending, Gray, at thirty-three, was artificial ! if I must write it, insincere ! You were thinking of the ending of your Poem ! You should have ended with the Impersonal ;

Approach and read — for thou canst read — the lay

Graved on the stone beneath you aged thorn.

Ye trembling sods that KNEW them not, Repent :

This waking song ; it is their monument !

The Personal Impersonal, Immortal (Paradox) TRUTH.

"*Nature's teachings*," unfortunately, dear Bryant, are impersonal also! She, the immortal impersonality; we also, bodies. We minds look elsewhere, to the great Personality, our LIVING Kinsman. The poem isn't true of a man; of a clod, too nobly told, Nineteen! and leaves no room for pleasant (unpleasant) dreams.

Shall all lie down and SHALL ARISE with thee,

And Nature's subjects hark the voice of God!

Earth open to the air; the air, to Heaven

And Heavenly Hope again revealed *to him*. *Da Capo*.

An error last and least excusable in a *poet*, in whom *intellectual* greatness is not expected, nor quite convenient, of figure (his creation, time, order of thought) — one doesn't wrap the drapery of the couch about him that he *approaches*, until he gets to and into it. Is this particular? Yes; Particular General! You can't hold communion with *forms*. *Him* is too narrow. To *one* who — communion with her various moods she speaks.

Second ending. "So live," &c.

His *number* in the silent halls, &c.

accept thy *gain*

Like one who wraps the *covering* of his couch about him.

The original is secondarily accountable for the failures of a correction; primarily, for the perfection, Inspiration, being *far-sighted* (!), offering "opportunity." We hunted always with *two* eyes! one, particular; the other, general, my guide's and mine. The telescope, *again*, hath both, one great one in the middle of its forehead no brand can blind, a little one, of little value, without which the other only brings down fire. Let everyone cultivate his own portion with all his powers. Give me the point, square, with its corners rounded, not to wound, $x^{2n} + y^{2n} (= \infty) = ?$

"Chamber," "dungeon," C. D., is a discord, where we want harmony, paradox, X, X_2 ($= xx_2, xx_3$), not x, y , Variety Unity, the particular general in figure and key. Dungeon is not a particular case of chamber. Number, the key to chamber and dungeon; slumbers, the common note. Every two of the four words chime except the two the boy poet hath chosen. Scourged to his *slumbers* would be all right!

My minister said this morning, Sunday, for illustration, in his sermon, "A man can't talk to a horse, cannot communicate!" "Yes, he can!" said I to myself, everything within the *common intelligence*, the note the pastor had struck and I had thought was going to sound it grandly. X and X_2 can match the x 's. A little patience shows this the secret of figure, harmony, C and G containing each the G above; the first, three times, the second, twice, in every pulse. Everything chords in the grand harmony, of course, away up somewhere finding common measure; C and E, in the E two octaves above; C and D in the D three octaves above; C and F# beyond the board, perhaps, and human appreciation (for example). Song has its range; and must be judged within it!

"Chamber" is a phantom to the poet; — he doesn't mean an ordinary tomb, but something that *never was* on sea or land — dungeon, a fact, to the galley-slave — a Disproportion. Jim Fisk had it who said "phantom gold"

did not weigh against the real; and was a poet! "Where the woodbine twineth," is pure metaphor. You can't classify or explain it; it is too rare, the test being, *you can't scratch it!* true also in form and rhythm, trochaic accent, imbedded rhyme, and quantification, which eludes but satisfies. I *think* it's the double spondee (no spondee at all), four long syllabled unit.

|| — — — — ||
 where wood bine twine
 — ¼ ¾ ¾ — ¼
 where the woodbine twineth.

"Daily food," *again*, is the only English example I can furnish, out of pure poetry, crystallized fancy. Shakespeare, the Scriptures, mines of metaphor, hyperbole, do not contain it, the rare diamond with curved faces! metaphor of three dimensions. Fancy is defined by Wordsworth, *ten lines above*. Shakespeare couldn't analyze it;

"Tell me where is Fancy bred,
 In the heart or in the head?"

Its creatures, the fairies. Pope did analyze and killed them; Milton realized, and let them live.

Both texts have removed an everyday statement into the transcendental plane at right angles with the plane of comparison. The woodbine twineth on the wall of a house; and men come and go upon the ground (the world of motion): a creature not too bright or good for human nature's (), is in the moral plane; daily food, in the physical (the world of experience). To prove our theory correct, we ought to be able to *manufacture* a crystal.

Gone for good, and *satisfactory*, were the ideas. Let us take a fresh one. We may have to discover a new world. Nothing else spreads over city walls; nothing else gives corporal satisfaction! A bath comes nearest; Shakespeare has that, but in plain metaphor, without the polarization. There is nothing easy about this! What in the spiritual is a bath? Lovelace must answer.

When in the thoughts of maiden sweet
 And hopes I bathe my soul,
 My own the skies that smiling greet
 The waves from pole to pole;
 When in their power I sink, I drown,
 And hands are stretched to me,
 The beaus that gamble in the town
 Know no such liberty!

It's wrong; I haven't got the transcendental. Try it again! "To take arms against a sea of troubles" just misses it, wanting the divorce (between ideas) made absolute. No; it's right! Woman's thought and man's are in planes inclined; they meet (in lines), but never mingle; the primary intersections, duty and gratification, being at right angles; Love, their Union, Paradox!
 The InDeductive!

The Deductive Philosophy is, ideas have relations; the Inductive Philosophy is, facts have laws: the InDeductive, seems to be, facts have relations; ideas have laws. In other words, it treats either field with the effect of the other, its AIM being at the nature of things (which is what we mean by mystery). The D uses proof; the I, observation, both tedious; the InDe, a species of intuition. For a simple illustration, when I wrote, p. 12, "*&c. forever*," I had proved only five or six cases out of an infinite number. I SAW the rest; and anybody else can see them who looks at them in the same way. In handling ideas like facts, and *vice versa*, the InDe covers the whole field of existence not already covered by its contradiction elements, with the force of a Paradox. How much of the nature of P's was the Deductive, Peirce behind it, able to show? I simply made them. *Ideas* are segments of Thought. Thought hath no unity, only extension (infinite) of three dimensions. The thinker, I, is an inference, the only thing Thought cannot think.

INDEDUCTION.

Proposition 1.

All *facts* are segments of some single, symmetrical (finite) unit. Finite, "or else their number is not expressible in numbers" — *reductio ad absurdum* again.

(*Corollary 1.* It's a poor rule that doesn't, &c., for instance.)

Proof.

Facts, being Thought embodied, come between two powers, the within and without, both centred, the first

expansive, into existence; the second compressing towards extinction. Symmetry comes from the centres, one or many. The *world* (I mean the sum of all things) is made on this principle — Axiom 1.

Suppose it wasn't!

Suppose the Without, which does press towards extinction, witness the fight for human immortality in all ages, pressed *sideways*.

We should then fight against and fear, like the Greeks and Romans, not extinction, but translation, into a state where thought and power, our two elements, were divorced, the realm of shades!

The corollary, (1), doesn't exist in this new (old) world.

An immortal man is a god	{	becomes	{	An immortal man is a shade. α
A mortal god is a man				A mortal shade does not exist. β
				A mortal god does not exist. β^2

One real and two imaginaries, like the three third roots of 1!

God and man being two concentric spheres, the Unit form of Multiple Being, with many inferior and superior concentrics (animals, Mars men). "I, in my Father, and my Father in me, and I in you."

God and man being the two figures of similar curve, external to each other with a gap between, no Unit at all. Mortals became gods: yes, exceptionally, proving the rule; never the reverse. The world is *not* made on this principle.

The InDeductive applied to a shade as a fact (no relations^a!), as an idea (no laws^b!), would have exploded him. The Deductive applied to him as an idea (having relations^c), the Inductive applied to him as a fact (having laws^d), do not hurt him at all.

^a to gods or men, for instance. ^b can't explain him, for instance. ^c thoughts. ^d came across the Styx.

Of course this is only the simplest illustration of something that won't be winked out of sight—or I am wrong! There is nothing in it “!”

Very well. No doubt right! Try it! Take the idea and the fact out of God, and what do you have left? Take the idea deductively. It can never get life! The fact inductively. You can never prove it, only manhood! The Inductive Deductive gives God, man infinite,^e which HE IS; and, By the Infinite, we are tending towards HIM!

^e in Power, already infinite in Thought. He can think a cone as clear as HE can. Fact hath no infinity.

Time and space are no part of us, only revealed to us by motion; so Thought and Fact, by Power (which injects one into the other). That we exercise it is an inference. If we were conscious of it, we could tell whether we could lift our weight with one hand or both, without experiment, knowing the same by lifting with our feet! (I) is a part of the (I)ndivisible God, Multiple Unity, a Paradox (infinite in Thought, finite in Fact), which is what

Christ saith, a *man*, I and my (your) Father are one. Can any one doubt it? What else *can* it be? A "brother" to Bryant's *clod*? An Independent Immortal? Hard to swallow! both these alternatives. In fact, the clod is what we get by translation in the opposite direction from the Greeks and Romans, into power without thought, and subject to the same philosophic conclusion. The other thing, the I. I., would not be a Unit with Godhead. We don't *know* of any such thing, independence being relative only, Independent Dependence, a Paradox, occupying the field. [Am I independent of that Chinaman that last perished in the flood? No, sir! I didn't know him; I hear the shriek of his last effort, somehow or other individualizing him, in the collective agony, and my arms reach out to help him if I could!] We can't *think* any such thing. "If an irresistible body meet an immovable one," the ancient effort, in vain, to think it.——And why should we *believe* any such thing? The Deductive, the Inductive, do not contain it. We want a new Philosophy, the Nonductive—or rather, we *don't* want it.

"Thought," above, might be our own or some one else's; Fact, sometimes, a state of mind, Sensation; and Power, spiritual, applied to Spirit. This is only a MEMORANDUM.

Suppose a new world entirely different from our universe, full of shapes. In comes a little one and tells the rest, "You are immortal." "We didn't know it!" they all reply. "I, who named you, have found it out. And I am mortal." "How did you *ever* discover *that*?"

Time, space, matter, Thought, and Power, are among the shapes; their prophet and discoverer is silent, dead long ago—for I have skipped a million ages.

Did they *breed* him, which have compressed him out of being? The irresistible answer is, no such thing as *man* ever existed!

I should prefer the other alternative, if we can't all continue together; I living—matter, time, and space, things of the past. Time and space can't make anything; and I can, Fact, by which alone they become visible (not being in Thought), and will not give up my eternity to them. Matter?—A former fact! Time and space?—Lost with it! Power?—He hath ceased to exercise! Thought?—Become invisible for an æon! *I do not believe this.* TRUTH lieth always between extremes, LIES on both sides, beyond. (The thoughtless clod, the powerless shade,—the bounds of manhood, imaginary extensions. The Resting Deity—Fudge!—of the Sacred Text; the Absorption into Nirvan of the Buddhists, extreme conclusions.)

I AM hath no power over I in us. Power makes Fact. I am a maker, *in* I AM; I AM in I. *Disproof, Agnostics!*

I was once wintering in a ship, which swam the ether; and, anchored to the moon, I went ashore. The sun *stood still*, an immense circle, but gave no warmth to me. Could I have mistaken the earth for it? My heart was frozen; and my brain, somewhat congested. Among other relics of past inhabitants, I found these fragments. When I let go of them, *they* stood still also. Could they have floated from the near planet? I might have settled a scientific question, if I had thought of it, of importance.

You run and read there, backwards, upside down.

Regaining red with fire-flags raised for Dawn to come!

Each cloud-wrought cliff against the flaming dome

Defend the nightward shore,

Like ocean in they pour,

In shapes that subjugate the starry crew!

Guarding the open door 'twixt him and night

What heavenly colors rise to human view,

Revealing GOLDEN Day's impetuous flight

ACROSTIC PARODY.

Φ. Β. Κ., 1890.

THE RAVIN'.

Once, upon a midnight cheerless, while I pondered, lone and peerless,
And an atrabilious, tearless look of domination wore,

All my Gold for glory pawning, underneath a purple awning,
Suddenly there came a yawning, yawning at my chamber door.

"'Tis some visitor," I muttered—here I opened wide the door—
Darkness there, and nothing more!

"Burglar bold from San Domingo scaped, perchance," said I, "by jingo!
Could I comprehend your lingo, yawning at my chamber door,

Beast of darkness, thing of evil, I would send thee to the devil,
Hadst thou wings to wind the devil, wandering on the Nightly shore;
I would send thee to the devil on the Night's Plutonian shore,

Only this, and nothing more."

Open here I flung the shutter, when, with many a flirt and flutter,
In there stepped a ghastrly goblin of the ghostly days of yore ;

Not the least obeisance made he, asked for me nor old O'Grady,
But with mien of lord or lady perched above my chamber door,
Perched upon the dusty demi—john above my chamber door,
Perched, and sat, and nothing more.

Then this grisly guest beguiling all my sad soul into smiling,
"Tell me," quoth I, "tell me truly, by that God we both adore,

Ghastly, grim, ungainly griffin, come to grace my ghostly tiffin,
And this meerschaum risk a whiff in, wandering from the Nightly shore,
Tell me what thy lordly name is on the Night's Plutonian shore."

Quoth the goblin, "Nevermore."

And the goblin, sitting lonely on that dusty jug, spoke only
That one word as if his soul in that one word he did outpour ;

Nothing further then he uttered, whispered, stammered, or sputtered,
Till at last I slowly stuttered, "Other friends have flown before ;
Stick thy sickly salutation on the domination door
Of some EDITORIAL CORPS !"

And the goblin, slowly signing half his name, responded, whining,

“We will pay you for the prose you sent, requested, twice before,

Lost, at first, to future ages, reproduced for worthy pages,

What we offered, ‘friendly wages,’ half a half and half a score,

Fifteen solid silver dollars — Say you FIFTY ? — On the door

Read your answer, Nevermore !”

“Prophet,” said I, “thing of evil, beastly bird or burly devil,

Whether tempter sent or whether tempest tossed thee here ashore,

Desolate, yet all undaunted, on this desert land enchanted,

Tell thy host by Horror haunted, tell me truly, I implore,

Is there, *is* there, balm in Gilder ? tell me, tell me, I implore !”

Quoth the goblin, “Nevermore.”

“Loveless, lost and lonely dragon, perched upon that empty flagon,

Waiting, waiting for the wagon,” quoth I to the beastly bore,

“I, the poet with a p-o, with a *vengeance* and a p-oh !

With a P-o-e, o-e, O ! I will read my stock and store,

Read you sweet, unsoftened stanzas from my only stock and store.”

Quoth the goblin, “Nevermore !”

"Be that word our sign of parting, ghost or fiend," I shrieked, upstarting,

"Or the dingy, dusky flagon shall be filled with goblin *gore* :

Conscience-seared, unshrived, unshaven, get thy ghastly name engraven

By some husky, hoary *craven*, graven on his bosom's core ;

Take thy beak from out my heart, and take thy beef from off my door !"

Quoth the goblin, "Nevermore !"

And the goblin, never listing, still is twisting, still is twisting

On the dusky, dingy demi—john above my chamber door ;

And his croak he still rehearses, heedless of my tears and curses,

And my mercenary verses are in tatters on the floor ;

And my soul from out those tatters that he scatters on the floor

Shall be lifted — nevermore !

There were four of us, Mr. Preface, Billy Teaser, and I, had met to pass a holiday at Mr. Flycatcher's. There were no ladies. Mrs. Flycatcher had not made her appearance, Billy Teaser and Mr. Preface had come alone, and Mrs. I was among the things that want to be. Things are classified, if we neglect the present, which is only an instant, by the latest authority in science, into things that were, and things that want to be.

I was sitting looking out of the window. Charley Flycatcher was leaning against the mantelpiece. Mr. Preface was standing in the corner with folded arms and eyes cast upon the floor, seemingly lost in meditation; and Billy Teaser was looking into all the books upon the table and at all the photographs he could find there or on the mantelpiece or hanging against the wall.

"What are we to do?" at length our host burst out in a fit of inspiration. "There are no ladies," I broke in, with an upward slide on the last word, and an inquiring look at Mr. Flycatcher. "Mrs. Flycatcher," said he, "is suffering from over-exertion, and not able to see us. Mrs. Teaser," he continued, turning to Billy with an interrogatory look. — "Had a bad headache, and couldn't come;" and Mrs. Preface was too busy.

"Sit down, Mr. Preface," said Flycatcher, taking a seat himself, "and let's consider the question." — Consider is here rightly used, according to the dictionary, and not abused as we see it in the daily paper. — "Let's go a duck hunting," said I. Mr. Preface expresses doubts whether it is the season (Flycatcher really cannot inform him. His neighbors' tame duck seems very healthy and lively); and neither he nor Mr. Teaser have any old clothes. "Couldn't you send word to Mrs. Teaser?" said our entertainer. "I've got old clothes enough for two, and if she could help us out" — "with some of hers," I interrupted him, "it would be all we want."

"Haven't the neighbors," said I, anxious to change the subject, for Billy's eye was on me, "haven't the neighbors got any early fruit, and couldn't we get up a foraging expedition?"

The conversation turned upon women's rights. "I think the women ought to vote," said I, "because" — "Why?" said Mr. Flycatcher. "Because then they'd have something to talk about." — "They talk enough

now," was the reply; "I don't know where we should be, should they do as you propose." — "My wife," said Mr. Preface, "earns two or three times as much as I; and I think she ought to have the suffrage." Three pair of eyes turned upon Mr. Preface. "What does she do?" I inquired. "Anything that my wife could do, my dear boy" — "Anything that *my* wife could do, old boy?" said Mr. Flycatcher and Mr. Teaser in one breath. "She gives lessons." — "In what?" — "Vocal and instrumental music."

"Let us give concerts!" said I to Mr. Preface. "You and I want something to do." — "You're too bad singers," said Billy Teaser. "No matter," said Preface; "they always have some bad singers to set off the good ones. At all events it's more honest than robbing fruit-trees or shooting your neighbors' ducks." — "I don't know," broke in Flycatcher; "you might as well rob them one way as another," — "and the public as well as your neighbors," said Teaser.

"Here," said I, "I have not enough to do. I make fifteen hundred dollars a year calculating" — "Calculating what?" burst out Teaser and Mr. Preface in a breath, — "and it doesn't take half my time." — "Could I do it?" inquired Preface and Flycatcher. — "If you knew how," I replied.

"Mr. Preface, I know, has time to spare," I continued. "Why don't you, Mr. Betender," broke out Teaser, on the spur of the moment, "write a book?"

"The very thing, Betender," said Charley, in the same breath.

"Mr. Preface could do it much better than I," I meekly returned.

"You're too modest by half, Betender" — "Not so" — "However" — "But" — they all broke in.

Finally it was agreed that we should each write an article — Mr. Preface was particularly cautioned that it should be short — and that the most successful with his article should write the book.

The articles having been drawn up, another day we met at Billy Teaser's house at an appointed hour in the afternoon, to dine ; and, after dinner, the cloth having been removed and the ladies having left us, at Mrs. Teaser's suggestion, to our wine, instead of wine, for Billy hadn't any, the articles were placed upon the table, and the preliminaries having been settled, poetry barred, and ten minutes at the utmost allowed to each reader, Billy, as expected, being host, began as follows :

THE BATTLE OF BIGGISH CAPE: An Epic Poem, *after Milton.*

"Poetry barred," Preface had the rudeness to say. "Unbar it, then," said Charley, anxious to hear the lines. I seconded the motion to let the bars down till Billy got through and we got ready to put them up again. "It may not be poetry," said Flycatcher ; "that is only the name of it ;" and it was agreed to allow the piece to come in upon its merits.

"It is too serious," said Charley, when he had finished. "Faulty in plot," put in Preface. "Why ?" asked Billy. "Because," said Preface, "you forget to bring the skippers home again." "They staid out fishing," said I, "till their clams gave out, and came home after dark, so that nobody saw them." "Before you come to a conclusion," said Billy, "you might wait to hear the others." I never saw Billy so worked up about a trifle. He would have gone off in a minute without another word, if some one had not suddenly changed the subject by

remarking that we had better join the ladies, as, if we stayed down there longer, they would suspect something; and we acted immediately upon this suggestion.

Charley Flycatcher, by the way, an admirer of T. De Q., and thinks he writes like him, took his next turn at his own house, with the same accompaniments as before, under cover of an invitation to dine.

Very good, said all in concert, and ought to take the prize, except Mr. Preface, who said in a tone of forced calmness that he supposed we must hear him next, to which Billy Teaser had the impertinence to reply, that he didn't care whether he heard him or not. Preface said he was a loafer, and of no account; and Billy would have retorted that Preface was another, when I spoke for peace, remarking that as Preface had objected in the first place to hearing Teaser, it was only tit for tat for Billy to object to Preface. Whereupon Billy, to show his appreciation of my motives, offered to substitute a second piece and withdraw the former; but all objecting, Preface read,

ON HOMER.

Homer was a great poet. In the one we admire the man, in the other the matter. He was one of the oldest poets we read of. A true poet never dies. He was a masterpiece-maker by trade, but I have not been able to learn what was his last name.

"Preface," said Teaser, on the spur of the moment, "I believe you are a fool!" "Tush," said Flycatcher, "the truth is not to be told at all times." "*You* don't tell it at all times," said Teaser; "I can vouch for that." "No personal allusions," said I; and the sitting broke up.

Next time came my turn, and feeling that I might take some liberty in my own house, I told them that being equally good at prose or poetry, it made no difference to me which I submitted to them; indeed, that I should be happy to serve them with specimens of either. Nobody objecting, I began with a poem, following up my advantage with studies for an Ode on the Passions, in which I aspire to beat Collins on his own ground; ending in triumph with *The Second Vision of Mirza*. The end of it was, that having, in my enthusiasm, displayed more faculty than I had intended, I found I had set a trap for myself, and was unanimously appointed to write the book.

THE SECOND VISION OF MIRZA.

On the tenth day of the moon, after having purified myself according to the custom of my forefathers, I repaired to the bridge which connects the seat of learning with my native town, and, leaning over the parapet, fell into a fit of meditation upon the adventure which had befallen me. A sigh involuntarily escaped me as I thought of the vision of the week before. "Shall I see no more," I murmured, "of the Genius of the Valley? shall I have no further glimpses of the Happy Islands? no other revelation of the Future until this body shall be laid away in the grave?" I was indulging my melancholy in this strain, when as I looked, behold, the noise of the passers by had ceased, and a Sabbath had fallen upon the scene. I felt myself caught up, as it were, in the flesh. The spirit of prophecy was upon me. Unconsciously I began repeating to myself the words, as if another had prompted them, "*The Past, the Present, and the Future; The Future, the Past, and the Present; The Present, the Future, and the Past.*" "Let us take leave of the Present," uttered a voice at my side, "and dwell for awhile

with the Future and the Past." At the same moment every familiar object vanished from my sight, and as I unconsciously reached out my hand for support as I felt the foundations of reality giving way beneath me, a figure appeared before me, took me by the hand, and set me upon my feet, the figure of one stricken with age, clad in robes of flowing white. His beard descended to his girdle, and from his girdle depended an enormous bunch of keys. "I am sent, Mirza," said the genius, "to answer thy prayer. Rise and follow me."

We had not gone far before we came in sight of an enormous structure of masonry, like somewhat to the ruins of the Coliseum which I had seen at Rome; like nothing that I could imagine, not having seen, so much as the Labyrinth of Egypt. It was, in some of its parts, in an excellent state of preservation. Indeed, there were many new bricks which contrasted oddly with the old walls, that seemed to have been put in to supply some failure of the original material. Other bricks in the same part of the wall had crumbled or dropped out, and no attempt had been made to supply them; and there were other parts of the structure which seemed to have been long deserted, buried in rubbish, and given up to the bats and lizards.

The structure, as I perceived from a distance, was of a circular form, divided according to the points of the compass into compartments, these compartments being further divided into innumerable chambers, connecting with one another by many winding galleries. This much could be perceived from a distance.

As we drew up to the gate which was nearest us (for there were many upon every side, of very varying dimensions), I was astonished at the din from within, a perpetual clamor, as of thousands upon thousands of people arguing, fighting, love-making, singing, lamenting, all in a breath; some in tones that were unintelligible, and

some that I could partly understand. "Be not afraid to enter," said the genius; "we are invisible, and may see everything without being discovered."

[When I wrote this I had not discovered Rhythm. Let us scan as we read!]

"Tell me," I exclaimed, "what *is* this structure,
 and what means the babble — that is going on within it."
 "The structure that thou seest," replied the genius, "is Human Language,
 and the tumult that thou hearest from within the walls —
 || is that of a vast multitude | of all kindred and people and tribes ||
 that have existed | since the foundation | of the world."

Two repetends, commensurate, 9, 9, 12, 9, 12, 9 long syllables; existed, foundation, being lengthened by cæsuras, — fōūn, shortened by attraction (ĕxistēd), and the accent that follows.

WILLIAM EWART GLADSTONE.

(*Written when he last returned to power.*)

As one of old from labors done

No long repose could find,

Our Hercules is England's son,

In body sound, in mind :

The acceptance here is true

Since he for Freedom rose ;

And they must fall whom once pursue

His ever-falling blows.

Th' Augean stalls his stalwart arm,

The age his aim have known,

To shield the race from serpents' harm,

And save her ancient throne :

Nemæan skin, nor bulk in view,

Nor club his manhood shows ;

But they must fall who test anew

His ever-falling blows.

No lorn Ætolian mourneth now

The promise of his youth ;

Our hero keeps his manly vow
 And owns his maiden truth :
 Of all the loves that scribblers ring
 In prosodies and prose,
 His honest lips our own shall sing,
 And ever-falling blows.

With quenchless fire he leads the fight
 For every righteous cause ;
 The Sphinx beside him sees he's right,
 Her paradoxes, laws :
 Where'er the sight of England's sun,
 The Right and Honor goes ;
 And they must fall who cannot shun
 His ever able blows.

We claim him all as eldest son,
 Though bred beyond the sea ;
 His endless fame for Freedom won
 Must undivided be :
 Where'er the tide of England's life,
 Orbital, ebbs and flows
 Will she recall his loyal strife,
 Unquestioned by his foes.

Q. HORATII FLACCI CARMEN XXXVIII.

Ad Puerum.

Persicos odi, puer, apparatus;
 Displacent nexae philyra coronae:
 Mitte sectari rosa quo locorum

Sera moretur.

Persian extravagance and state,
 Wreaths bound with lime-bark, boy, I hate;
 Forbear to follow where the late

Rose lingers.

Simplici myrto nihil allabores
 Sedulus curo; neque te ministrum
 Dedecet myrtus, neque me sub arcta

Vite bibentem.

With simple myrtle naught combine;
 Adorned with myrtle, serve the wine
 While I reach out beneath the vine

My fingers.

CARMINUM LIB. III. 29. Translated.

TIME, 4½ HOURS.

Tyrrhena regum progenies, tibi
 Descendant of Etrurian princes, thine's
 Non ante verso lene merum cado
 The mellow tribute of unopened wines;

Cum flore, Maecenas, rosarum, et
 A crown of roses at our humble gate
 Pressa tuis balanus capillis

Thy brow, Maecenas, ever doth await,
 Jamdudum apud me est. Eripe te morae
 And Arab ointment: snatch an hour away;
 Ne semper udum Tibur et Aesulae
 From sight of Tibur dank the livelong day,

Declive contempleris arvom et
 Of downward sloping roods of tillage come,
 Telegoni juga parvicidae.
 And views of Aesula and Tusculum.

Thy tedious plenty and thy lofty home,
The smoke, and wealth, and roar, of teeming Rome,

Desert; forget; and find new pleasures now
Where frugal dinners smooth the wrinkled brow;

From purple hangings keep thy lids aloof
Beneath the narrow, poor, Horatian roof.

Andromeda's bright father now displays
His hidden fire, and now Procyon burns,
And with the sun the dogstar next returns

To scorch the prospect bare with searching gaze;
The fainting shepherd leads his tottering sheep
To seek the streamlet and the shadows deep,

The thickets of the bristling wood nor find
Upon the silent bank the wandering wind.

Thy care and fear is for the common weal;
And, anxious for the City, thou dost feel

How China and discordant Don are schooled,
And Bactra, long ago by Cyrus ruled.

Foreknowing God conceals in thickest night

The future, and at boding mortals smiles:
Present affairs be sure to order right;

The future's like a rapid river whiles

Now with smooth current gliding to the sea,
Now whirling rounded stones, flock, house, and tree,

Between resounding hills and echoing wood

When freshets wild afflict the neighborhood.

The self-contained is happy who can say,
If only, *I have lived*, at close of day;

To-morrow come black clouds or solar flood!

HE will not order out of sight and mind
Whatever triumph we have left behind,

Nor see our humble efforts all undone

If *any* goal the fleeting hour hath won.

Fortune is in her cruel beauty glad,

And loves to carry a high hand with men,

Nunc mihi, nunc alii benigna

Now coddling me, and now some other lad,

Bestows her smiles but to withhold again :

Constant, I own her; when with speedy wings

She beats the air, I cast her gifts away,

In virtue wrapped, and, though no dower she brings,

Content with honest Poverty to stay.

'Tis not my way to take to woful prayers

Whene'er the mast with Afric tempest creaks,

And covenant with vows, the greedy sea

To cheat of Cyprian or Tyrian wares ;

But in my two-oared skiff the breezes me

Shall safely waft though wild Ægean shrieks,

And Pollux and his twin my guardians be.

SONNETS.

WOMAN.

WITH whom perfection, like an angel, sits;
 To whom the East no added lamp can bring,
 Nor errands of the South on wanton wing
 Can warmth impart to mar our wakeful wits;
 Nor donned adornment so thyself befits

As that thou ownest and we only sing,
 And fed with rapture touch the tuneful string;
 Nor shape can harm but what thy heart permits;
 The flower of all our hope and breath of heaven,
 A hope that com'st to oft untimely end,
 And friend and counsellor to mortals given,—

Ah! why not always counsellor and friend?—
 What diverse agents with thy soul have striven
 Such devious threads in one design to blend?

So fickle that the changes of the moon

Are fixed for aye to thy Inconstant ways,

Nor heat to cold in most tempestuous days,

Nor storm to sunshine doth succeed so soon;

Thy love, our dearest right and rarest boon,

When most we count it ours the farthest strays,

And quenched in blindness are its brightest rays

That made our being one immortal June;—

So true, the needle pointing to the pole

In darkest hours of all-forgetful night

Is *error*, counted with thy Constant soul

That naught of human or inhuman blight,

Nor all the destinies that onward roll,

Can once obscure and not extinguish quite.

Enough! The genius that thy nature cast

A war within of pledge and purpose waged,

By wayward hands in wanton hours was paged

The book we fain would read from first to last,

WOMAN, its title; but what faith, aghast,

Or spent with daily toil, or least engaged,

In coldest hours of thought or grief assuaged

Can bind its fluttering leaves or hold it fast?

The world is thine; the future is our own:

Thy paradise is ours; and ours is lost!

No monarch winning half so wide a throne

Doth lay such tribute at our daily cost

As thou, the empress of the heart, alone,

Who never shalt its treasures exhaust!

THE PASSION OF YOUTH.

Short-sighted madness and unlettered pain

That claimedst all the purpose of my breast

And unreturnedst e'en the meed of rest

Why, grieved or wounded, comest not again?

Who lately summonedst my ardent brain

Nor weaker wine had roused, to daily quest

And nightly purchase for its present guest

Of gold to gild thy long-endurèd chain ;

What altar beck'ning to enlarged life

From roughest ways our single steps and slow

Or fondest smile of her we took to wife

Could half thy presence e'er be taught to know,

Or field where thoughtless human love is rife,

Where lilies bend and roses ever blow ?

Belovèd passion, busy little heart

Within my heart that mad'st thyself so free,

Without a thought, 'twould seem, of truth to me,

How quite a rude, ungrateful pet thou art,

That, nursed with all my substance, thou must part

And from my present ever roving be,

Or heavenward fading now or over sea,

Some fresher victim stirring with thy dart !

Whom once dost visit comest nevermore

To keep or chide his all-devoted tryst ?

Who looking longing from what lonely shore

Doth see thy features all dissolved in mist,

Or through the opening of some bridal door

Thy passing foot hath caught and, lingering, kissed.

Fair foot! fair head! fond tribute! ever thine

Be all within our human power to lay

Along the pathway of the perfect day,

And ever fresh thy dear, delightful shrine,

In whom all earthly-heavenly charms combine!

What second victim wasteth breath to say,

"Thou passion born of that immortal ray

That ever somewhere on the hills doth shine"?

By which we earthy pilgrims were undone

And doomed an age of manly days to pass,

Deprived of once the lustre of the sun

That shineth on us now but in the glass

That Fancy holdeth where the wayward run,

To catch some springing boy or dreaming lass.

NIGHT.

Of sombre hue,
By DAY unseen,
His crimson fires
I fly between ;
His faint desires
Refresh with dew,
And piece with black
His green and blue.

VOX POPULI.

Lo Adam returning

In passion and pity

To visit his billion,

Hath entered the City :

His heart in him yearning,

Lo Adam returning !

“O exile from Eden

Because of my sin,

Enough thou art punished

Without and within !

What warrant hath cancelled

The characters now,

‘And thou shalt eat *bread*

By the sweat of thy brow’ ?

Whence comes this complaint,

In the name of the dead,

From lips of the lying,

This hubbub for bread ?”

See Adam returning,
 And millions unfed
 Elect their legations,
 Including the dead :

*From far in the wild whom the forest denies,
 And down the long coast where the fisherman lies,
 A mother misfortune is hunting for men,
 And catching and catching them over again ;*

Our brothers in China condemned by the score
 Of thousands and millions, and multitudes more,
 By the side of the yelling, the Yellow Levee
 That bridges the banks of the yellow-dead sea ;

What Levy can reach
 In the Herald of Gore
 The mortal affiche
 Of its hurrying roar ?

Our comrades in India
 Condemned by the pale
 Cold spectre advancing,
 "No poppy for sale?"

"Thy children petition" — thus ended the ditty —
 "Our Father returning to country and city,

Who clamor for bread with their lingering breath,

And dying, not *lying*, — or lying in *death*, —

And reach out their arms with a pitiful moan,

'We asked but for work; and they let us *alone*:

We ask them for bread; and they give us — ——!"

THE NINETEENTH CENTURY.

Prodigious, artificial whole,
Without a body or a soul,

Which can but half explain, or wōn't,
The things we know, and some we don't,

If what so oft we hear be true,

The Arabs gave their fives to you,

Or fingers, — how they spelt who knows? —

And multified them by their toes;

A hundred houries, hundred days,

A hundred big, deceitful beys,

A hundred once, a hundred ones,

A hundred seasons' centreing suns!

When we have scored with fingers deft

The wonders of, the deep disgrace,

And have to straggle to the left,

To view thy enterprising face,

What names and notions then shall hide
Our understanding or our pride ?

What worlds be saved beneath the sun
For TWENTY or for TWENTY-ONE ?

For godly gravity perchance
Some single thought may swift advance ;

For manly animal again
Some kindred token fill the pen ;
Perchance, in short, forsooth, perhaps,
The world's philosophy relapse :

For all indeed too wondrous wise
Is he who thinks he lives and dies !

To *live* will surely mean to be,
Not, like dependent you and me,
On every film, and sign, and sense,
That Heaven's lost offspring recompense,

Or drug's assistance or delay
That doth apothecary pay :

For higher than the fount no man
Ascending ever came or can ;
And when and wheresoe'er the goal
Must be the birthright of the soul.

More things in heaven, we all agree,
Than dreamed of in "*phi—los—o—phee*" ;

And while the omnipresent much

Is twice translated into Dutch,

Twice yielding our incumbent shell,
Our earthly dreams of Heaven and hell,

When all that IS by right we see,
As gods or mortals shall we be ?

THE PATRIOT'S DREAM WHO SAILS ALONE
THROUGH SEAS OF UNEXPLORED TIME
HATH CLAIMED THE ISTHMUS FOR OUR OWN
IN DISTANT DAYS UNKNOWN TO RHYME.
WHO CLAIMS IT NOT HATH DREAMED A CRIME !

FINIUM FINIS.

SUNDAY, XXII. FEBRUARY, MDCCCLXXXI.

GOD SAVE THE UNITED STATES OF AMERICA !

To God, Almighty King of earth to-day,

After this manner, therefore, will we pray :

Our want is subject to His grace divine ;

His truth the bread of life,

And *love* the wine.

Our Heavenly Father and our country's Friend,

To patriot fathers and their sons the same,

On earth advance Thy kingdom without end

Till all her myriads Thy love proclaim ;

Thy will be published to hearkening men

Until her boundaries ring with heaven again.

Give us our sustenance, our faults forgive,

As we, Thy suppliants, forgive and give ;

And lead us from temptation's power away

And evil's shadows into endless day ;

For Thine the kingdom is, the power, the fame,

The glory and the never ending name.



IN MEMORIAL DINING HALL, HARVARD UNIVERSITY.

SEE PP. XII AND XIX.

My design on the cover, with its regular lines and heart-like curves, symbolizes the flower of Love and Truth. The fruit developed at the centre (by continuing the lines) is a star, the emblem of Unchange.

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